The magazine for AUSTRALIAN Amateurs

August 2003
Volume 71 No 8

Amateur Radio

$ 5.95
inc GST

REMEMBRANCE DAY

Contest 2003
16 & 17 August

- Six co-axial Baluns for VHF/UHF Antennas
- AO-40 Dual Frequency LS Dish Feed

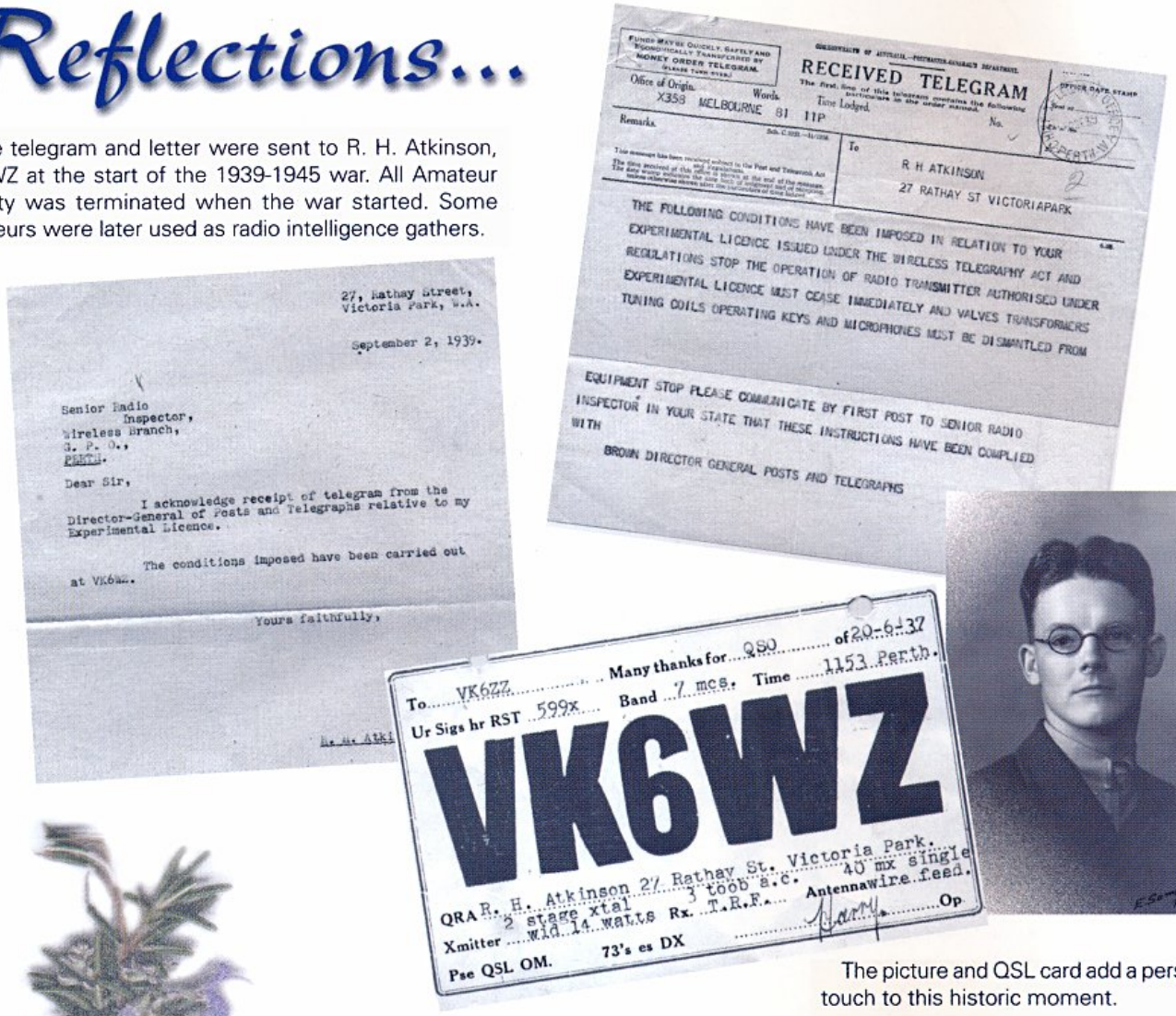
Brush up your Morse
with Drew Diamond VK3XU

ISSN 0002-6859

Photograph courtesy of
Australian War Memorial
Negative Number 073773

Reflections...

The telegram and letter were sent to R. H. Atkinson, VK6WZ at the start of the 1939-1945 war. All Amateur activity was terminated when the war started. Some amateurs were later used as radio intelligence gathers.



RECEIVED TELEGRAM

Office of Origin: X358 MELBOURNE 81 11P

To: R H ATKINSON
27 RATHAY ST VICTORIAPARK

THE FOLLOWING CONDITIONS HAVE BEEN IMPOSED IN RELATION TO YOUR EXPERIMENTAL LICENCE ISSUED UNDER THE WIRELESS TELEGRAPHY ACT AND REGULATIONS STOP THE OPERATION OF RADIO TRANSMITTER AUTHORISED UNDER EXPERIMENTAL LICENCE MUST CEASE IMMEDIATELY AND VALVES TRANSFORMERS TUNING COILS OPERATING KEYS AND MICROPHONES MUST BE DISMANTLED FROM EQUIPMENT STOP PLEASE COMMUNICATE BY FIRST POST TO SENIOR RADIO INSPECTOR IN YOUR STATE THAT THESE INSTRUCTIONS HAVE BEEN COMPLIED WITH

BROWN DIRECTOR GENERAL POSTS AND TELEGRAPHS

27, Rathay Street,
Victoria Park, W.A.

September 2, 1939.

Senior Radio
Inspector,
Wireless Branch,
G. P. O.,
PERTH.

Dear Sir,

I acknowledge receipt of telegram from the Director-General of Posts and Telegraphs relative to my Experimental Licence.

The conditions imposed have been carried out at VK6WZ.

Yours faithfully,

R. H. Atkinson

To VK6ZZ ... Many thanks for QSO ... of 20-6-37
Ur Sigs hr RST 599x ... Band 7 mcs. Time 1153 Perth.

VK6WZ

QRA R. H. Atkinson 27 Rathay St. Victoria Park.
Xmitter 2 stage xtal ... 3 tpob a.c. ... 40 mx single wire feed.
Pse QSL OM. ... 73's es DX ... Op

The picture and QSL card add a personal touch to this historic moment.

The following extract from "Clare, A District History" by Robert J. Noye, tells us what happened in Clare, South Australia when the 1914-1918 war started.

Wireless, a new form of communication, appeared in the 20th century. The first wireless station in the district was operated by W. P. "Wireless" Ward at Stanley Flat, next to the Clare Race Course. He had been a marine engineer until he lose an eye in an accident, leaving sea in 1910 to settle at Largs Bay where he had a small radio station. In 1912 the family moved to Stanley Flat, where a large aerial was erected and spark transmissions were made using the call sign AWP. At the outbreak of World War 1, the wireless equipment was impounded by the authorities as a security measure and instructions issued for the demolition of the aerial. When this was not done the Army arrived, an axe was produced and the majestic masts brought crashing to the ground.

The wireless equipment was returned in January 1919. Two sixty foot poles were brought from Bungaree and a new aerial erected, and once more the station was "poking holes in the ether". A new call 5BX was allotted in 1921.

Amateur Radio

The Journal of the Wireless Institute of Australia

ISSN 0002-6859

Volume 71
Number 8
August 2003

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Production Deadlines

Advertising booking and articles for publication 10th of preceding month.

Hamads and advertising material deadline 18th day of preceding month

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Our Cover this month

Lae, New Guinea. 1944-06-09. TX3302 Sergeant H. Smith (1), testing radio Equipment after its repair in the wireless section of the 2/7th Advanced Workshop. Photo courtesy of Australian War Museum, negative no. 073773.

Contributions to Amateur Radio
Amateur Radio is a forum for WIA members' amateur radio experiments, experiences opinions and news. Manuscripts with drawings and or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, How to write for Amateur Radio is available from the Federal Office on receipt of a stamped self-addressed envelope.

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When back issues are no longer available, photocopies of articles are available to members at $2.50 each (plus an additional $2 for each additional issue in which the article appears).

Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's first and oldest
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Founded 1910

Representing
The Australian Amateur Radio Service

Member of the
International Amateur Radio Union

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Editorial Comment

Colwyn Low VK5UE

"Good Luck in the Contest!"

Well another month has past and at the last moment I'm sorting out my thoughts for this issue.

I have been asked to include two requests for assistance.

The first is for a volunteer to provide reviews of equipment. New and not so new items would be great. New equipment we, WIA, would arrange to borrow from the manufacturer, old equipment would be loaned by the owner to the reviewer following a request in AR. Reviews would have to be objective warts and all. They would have to be backed up by on the bench measurements, referred to good standard measuring equipment, and some on air operation. A reasonable way with the English language would be essential. If you are interested please email me. If you think someone has the necessary qualifications try and talk them into it and promise to give them a hand, if necessary.

The second is the Contest Column. Ian Godsil is no longer able to provide the column in the form he used to and would like to hand over to a Contester with the willingness to encourage greater contest participation and to provide hard copy of contest rules and results to the wider public. Even today not everyone has the Internet.

I am writing this as I endeavour to get my Beetle tidied up for WICEN operation on the Cooper's Pale Ale Rally SA. One door need all the rubbers replaced and the battery arrangements need tidying up from my previous efforts. Firstly the 6 V main battery needs a twin to give 12 V and a system to charge in parallel and use in series. A couple of big germanium diodes and a double pole double throw switch work quite well. However there is a need to have one or two other batteries to run secondary gear. This year, as in other Australian Rallies WICEN supports, there are voice nets, packet nets and the SkyNet equipment all operated by and power sourced by WICEN operators. Of course there is also the need to have back up !!!!.

This issue commemorates the Amateurs who served and died in the Services in World War II. As it is now some 58 years since the war ended, maybe the time has come to remember all amateurs who served in the Forces in all wars. We certainly seem to be involved in continuing armed conflicts so the need to remember those who served continues. Maybe you would like to consider some variation in the significance of the RD in the coming year. However the RD is "The Australian Contest". More amateurs make an effort to take part in this contest than in any other. Most exchanges end with a "Good luck in the contest" wish. The fact that we have an interstate competition as well adds a bit of spice and as long as it is not spite all is well. The formula for determining the winning state try to reward states who get a larger percentage of state amateurs submitting logs than in previous years and those states which make lots of contacts. It does give Tasmania and ACT the chance to beat NSW and Victoria.

> The RD is "The Australian Contest". More amateurs make an effort to take part in this contest than in any other.

Western Australia won last year who will make the effort to come top in 2003?

I hope to work over 100 stations this year, how about you?

"GOOD LUCK IN THE CONTEST" de VK5UE

WIA Comment

Ernie Hocking VK1LK
Email: president@wia.org.au
Or via PO Box 691, Dickson ACT 2602

For a hobby that people keep telling me is dying there appears to be an awful lot of activity

ACA Licence Review

As I indicated in last month's notes the ACA propose to conduct a review of the whole amateur radio licencing arrangements. Today I received the following from the ACA:

> *A review of the amateur service regulations in Australia will commence this month (August) with the release of a discussion paper by the Australian Communications Authority (ACA). The ACA will write to all amateur licensees giving details of how to obtain a copy of the discussion paper and outlining the review program. As part of the review, the ACA is arranging a series of public meetings in each State capital city in early September. The times and locations of these meetings will be advertised by the ACA closer to the date*

As we hear more from the ACA the WIA will be issuing this information using all the means at its disposal such as the weekly broadcasts, the WIA web page and of course QNews (and of course a special thank you to Graham Kemp VK4BB for the sterling service that he continues to perform for all amateurs in Australia in providing this excellent news broadcast).

This review of the amateur service is of great importance to the future of Amateur Radio in Australia. If we get it right then we will be in a position to actively promote the hobby in years to come based on a sensible and practical licencing scheme. If we get it wrong and make entry into the hobby too difficult, bureaucratic, lengthy or costly then we can be certain that the hobby will have a difficult time in years to come with the number of amateurs falling.

Once the details of the ACA discussion paper are known then WIA clubs and Divisions will be the place to discuss the proposals and the nature of our official reply. I would encourage you all to participate actively in these discussions. Where you know of amateurs who are not currently members of the WIA, I would also encourage you to speak to them to seek their views on the ACA discussion paper. As I indicated above it is important that Amateur Radio in Australia achieves a good result as part of this consultation process. We must put aside partisan issues, of whether a given amateur is a member of the WIA or not, and focus on what really matters – namely the hobby of Amateur Radio. As always I will be delighted to hear your views on this important discussion

WRC 2003 and Morse Testing

On Sunday 13 July the WIA held a teleconference to discuss a number of matters including the official WIA response to the removal of the Morse testing requirement after WRC 2003. At this time the ACA has indicated to the WIA that it intends to use the licence reform process referred to above as the single reform of the Licence Conditions. This would have the affect of delaying the adoption of the WRC recommendations until early 2005.

At the teleconference the WIA council voted unanimously to actively promote the immediate removal of the current Morse testing requirement. This has already happened in a number of other countries (such as for example the UK, and Switzerland) with the administrations in these countries simply issuing an administrative order recognising that the Morse Code test is not longer required. The initial response from the ACA has indicated that it does not expect to vary its current position but will at least review the situation. Amateurs that have written to the ACA about the matter have been informed: "The ACA thanks you for your input and/or comments. The ACA will be publishing a discussion paper on our website from August to the end of October. All amateur radio operators will be notified by mail when the document is ready for viewing. Interested persons will be given three months to make any comments or suggestions. At the end of the three month period the ACA will review all comments and consider appropriate changes to legislation. Any changes to legislation will occur in early 2005." I will continue to keep you informed of our progress on this matter as the situation unfolds.

If we get it right then we will be in a position to actively promote the hobby in years to come based on a sensible and practical licencing scheme. If we get it wrong and make entry into the hobby too difficult, bureaucratic, lengthy or costly then we can be certain that the hobby will have a difficult time in years to come with the number of amateurs falling.

The 2003 Remembrance Day Contest

Finally, I'd like to say that I am looking froward to doing some real Amateur Radio during this year's RD Contest and propose to operate on as many bands and modes as I can over the weekend (160 - 2m on CW and phone). So if anyone hears some slow speed CW emanating from the Nations Capital then please bear with me and give me a call. I look forward to chatting with you on air.

73s for now and I look forward to hearing you comments, either directly or via the divisions. All the best in Amateur Radio

ar

Six co-axial baluns for VHF/UHF antennas

by Gordon Mc Donald VK2ZAB

The purpose of Aerial Baluns

Almost all antennas used at VHF/UHF utilize dipoles as the driven element. This includes Yagis, Co-linear/broadside arrays and parabolic reflectors. In order to properly function a dipole must have the same level of current in both halves resulting from equal and opposite voltages applied to its terminals and equal impedances to ground. When this is so we say it is "balanced" .

If this condition is not attained several problems arise. Almost all antenna installations at VHF/UHF make use of coaxial feed lines to the shack. Coaxial lines are not balanced. The inner is supposed to be hot and the outer at ground potential. This condition means that the wave is confined within the coax. It cannot radiate.

If you connect the coax straight on to the dipole you ruin both the dipole balance and the coax propagation mode. RF current will flow on the outside of the coax resulting in radiation not controlled by the antenna, more noise on receive, more loss and difficulty in obtaining a good VSWR. Furthermore the antenna pattern will be offset from boresight, a condition known as squint, most noticeable with narrow beamwidth antennas.

To avoid this catastrophic situation we put this thing which can accept a balanced connection on one side and an unbalanced connection on the other. A BALanced to UNbalanced transformer or BALUN.

Baluns are also used at HF and in circuitry such as to drive push pull amplifiers from unbalanced drivers. These are usually toroidal or conventional transformers and are outside the scope of this article.

Attributes of baluns

The first requirement of a balun is to ensure that balanced currents flow in a dipole even though the line to the shack is unbalanced coaxial. If the currents on each side of the dipole are not exactly equal the balun is less than 100% efficient. This is a normal situation even though the departure from perfect is usually very small particularly at the design centre frequency. At higher and lower frequencies the balance efficiency decreases. Thus baluns have a "balance efficiency bandwidth".

The balun is connected between the coax line to the shack and the antenna dipole. The normal requirements of impedance matching dictate that it must match both the line impedance and the dipole impedance over a band of frequencies. Thus the balun has an "impedance matching bandwidth". This is not the same parameter as the balance efficiency bandwidth and is normally not of the same magnitude either.

Most baluns can only match impedances in set ratios e.g. 1:1 or 4:1. Some can match virtually any impedance to any impedance. Some baluns are easy to make and some are not and some baluns are easy to weatherproof and some are not.

Types of baluns

Broadly there are three types of baluns. Choke baluns function by inserting a high impedance between the balanced load and the outside of the coax so that current can't go that way. A simple one of these is called a "Pawsey" stub. Another, which will be described in more detail under the "Common Baluns" heading is the "Bazooka". At HF and lower VHF choke baluns can be made with coils and/or ferrite beads.

Hybrid ring baluns function by making use of the polarity reversing and impedance transforming characteristics of coaxial transmission lines and wave guides. The most common form of balun used by amateurs, the half wave line balun, sometimes called a trombone, which we will also describe in more detail, is a degenerate form of hybrid balun.

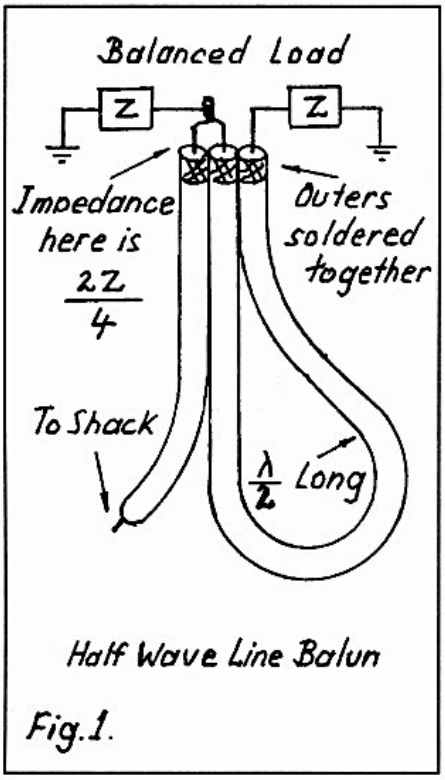
The third category is for those which do not readily fit in either of the above. The slotted tube could be called a "dual mode balun" . It will be described in more detail also.

Three *common* baluns used by amateurs

[1] The HALF WAVE line balun is a hybrid line balun which is not quite all there. See "Uncommon Baluns". It is illustrated in Fig 1. The balanced load is represented by equal impedances from the two terminals to ground. The two terminals are connected together by a half wavelength of coax line so that the impedance from one end to ground

The motivation to write this article stemmed from a discussion about split tube baluns on the VK-VHF Email reflector. A search for data available to radio amateurs, mainly in overseas books and magazines, was found to be scanty, very basic, often misleading and occasionally quite wrong.

Furthermore, baluns seem to be taken pretty much for granted until things don't go according to plan with antenna installations when they often fall under suspicion leading to questions being raised as to whether or not they are "right". Unfortunately a satisfactory answer to this question is seldom forthcoming because, although baluns are generally broad band non-critical things, their operation is widely misunderstood and it seemed to me that having a bit more information available about them would be a good thing. That is the intent of this article.



Half Wave Line Balun

Fig.1.

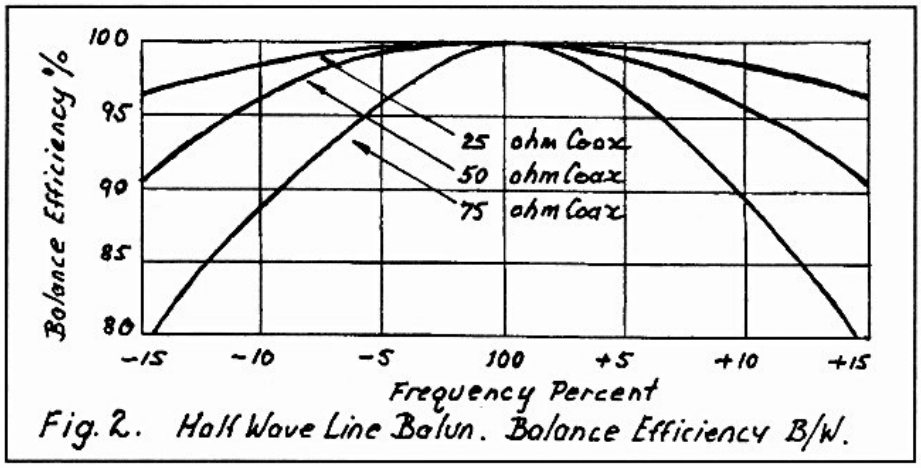


Fig. 2. Half Wave Line Balun. Balance Efficiency B/W.

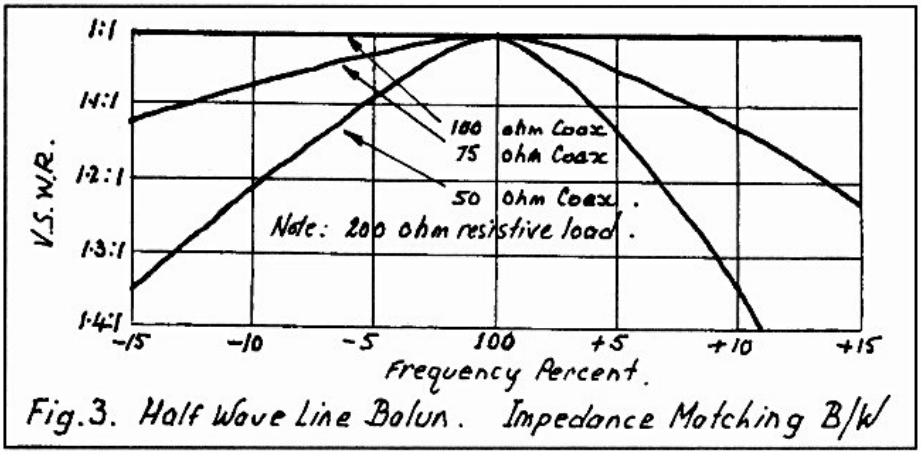


Fig.3. Half Wave Line Balun. Impedance Matching B/W

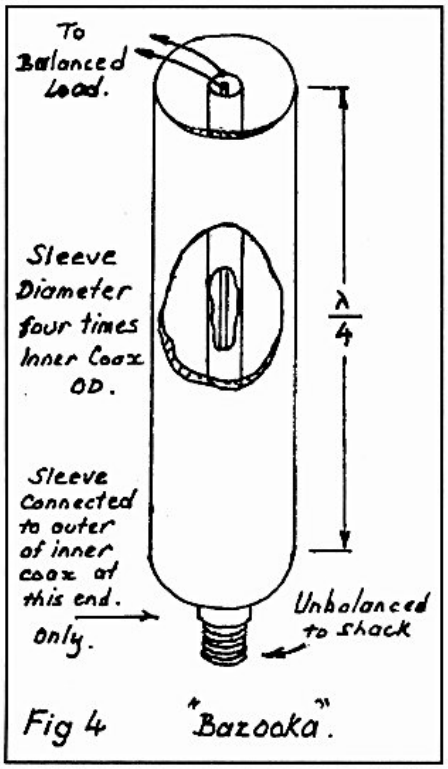


Fig 4 "Bazooka".

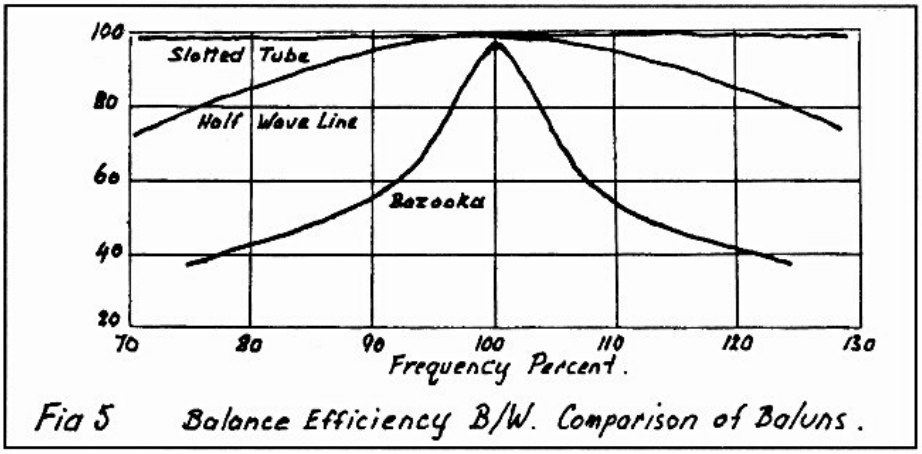


Fig 5 Balance Efficiency B/W. Comparison of Baluns.

appears in parallel with the impedance from the other end to ground which is connected to the feed to the shack. Furthermore the polarity at one end is the opposite to that at the other because it is a half wavelength away.

A 4:1 impedance transformation obtains between the balanced and unbalanced terminals because of the method of connecting the loads. They are in series at the balanced terminals and in parallel at the unbalanced terminal. Thus if there is 100 ohms to ground from each of the balanced terminals, the balanced load is 100 + 100 = 200 ohms and the unbalance terminal sees 100/2 = 50 ohms, a common situation which is not affected by the impedance of the half wavelength of coax. However both the balance efficiency bandwidth and the impedance matching bandwidth are dependent on the impedance of the coax.

The balance efficiency bandwidth was determined by measuring the unbalanced current between the common connection point of the balanced loads and ground over a range of frequencies and for half wave lengths of different impedance coax. This is shown in Fig.2. We see that balance efficiency obtains over wider bandwidths for lower impedance coax.

The impedance matching bandwidth was calculated for different impedance coax and is shown in Fig 3. We see that the widest bandwidth obtains when the impedance of the coax is one half of the impedance of the balanced load.

The most common impedance used for the half wave section of coax is the same as that used for the feed to the shack which is normally 50 ohms. The balun bandwidths which obtain under these conditions are quite suitable for the narrow bandwidth requirements of amateurs.

The half wave balun departs from perfect balance at resonance only by that amount due to the loss in the half wavelength of coax. This is normally negligible.

The half wave balun is waterproofed by sealing the ends of the coax or by mounting the whole terminal region in a box.

[2] The BAZOOKA is a choke balun which comes in several versions. The simplest of these is shown in Fig 4. Basically it is a coaxial line with a quarter wavelength sleeve connected to the coax outer and the balanced load end open. This arrangement presents a high impedance to currents which would otherwise flow down the outer of the coax. Note that the physical realization of this must be such as to maintain the high impedance. To do this the sleeve is normally a copper tube with air space between it and the outer of the coax. The diameter of the sleeve should be much greater than that of the coax. Four times is satisfactory

If the impedance of the coax in the sleeve is the same as that of the balanced load [1:1] the impedance match bandwidth of the balun itself will be so wide as to be not worth worrying about. However the same does not apply to the balance efficiency bandwidth which falls away at all frequencies at which the sleeve is not a quarter wavelength long. See Fig 5.

The bazooka can match a wide range of input to output impedances. The coax line inside the sleeve can double as a quarter wave transformer by making it of that impedance which is the square root of the line impedance multiplied by the load impedance. Of course, if you do this the impedance matching bandwidth will be limited in the same way as the bandwidth of any quarter wave transformer. Nevertheless, it is this attribute which may have accounted for the popularity of the bazooka in the past when it was frequently made with copper tubes making it somewhat more difficult to put together than the half wave line.

The simple bazooka departs from perfect balance at resonance by a significant amount due to physical asymmetry at the balance terminals. It has, in effect, a quarterwave stub on one dipole terminal but not the other. This shortcoming can be corrected at the expense of additional complexity. See "Uncommon Baluns".

The simplest way to waterproof a simple bazooka is to mount it so that the open end of the sleeve faces down.

[3] The SLOTTED TUBE balun qualifies as a common balun because it is used to obtain squint free operation from parabolic reflectors using dipole feeds. See Fig. 6. The slotted part of the coaxial line supports two modes of transmission simultaneously. That is a TEM or coaxial mode which is virtually unaffected by the slots if they are not too wide and TE_{11} or balanced mode which exists between the two wings of the slotted assembly and excites the dipole. The shorting post dictates that coaxial mode voltage can be only half that of the balanced mode voltage and since no power is lost in the exchange, Ohms Law dictates that the balanced impedance is four times the unbalanced impedance at that point. See Fig.6.

The balance efficiency bandwidth of the split tube balun is so wide as to be not worth worrying about. See Fig.5 However the same does not apply to the impedance matching bandwidth which falls away at all frequencies at which the slots and inner are not a quarter wavelength long.

If the slotted tube is used to feed a straight dipole, the balanced impedance will be that of the dipole [nominally 72 ohm if shortened to resonate] in parallel with that presented by the quarter wave shorted twin line formed by the wings on each side of the slot which, at slot resonance, will be very high and the normally low capacitance across the dipole terminals.

In normal practice only the dipole impedance is significant. This means that the unbalanced impedance will be nominally 72/4 = 18 ohm. Fortunately the coaxial line formed by the slotted tube and the inner may also be used as a quarter wave transformer as in the bazooka. Therefore, in this case, the impedance of that line must be the square root of 18 x 50 = 30 ohm enabling the 50 ohm input/output connector to be mounted at the shorted end of the slot as shown in Fig 6.

The slots should be as narrow as practical to prevent radiation. If they are narrow they may be ignored when calculating the coaxial line impedance because the increase in impedance of the line with slots is only 0.03 x A x A where 'A' is the angle subtended by the slot[s] in radians.

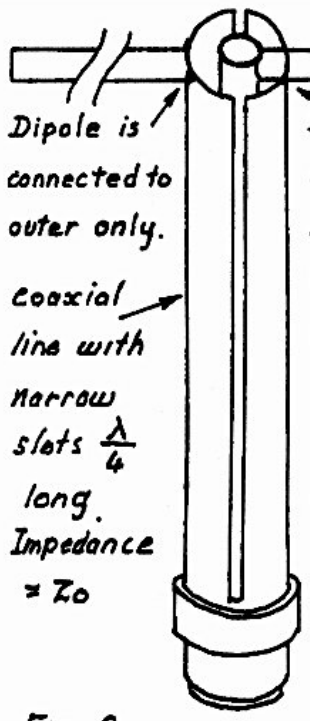
In another common configuration, the slotted tube is used to feed an EIA antenna used either as a gain standard or as a feed for a parabolic dish. In this case the impedance due to the two dipoles, spaced at a half wavelength and mounted one quarter wave above a sheet reflector and connected together with 171 ohm balanced lines is nominally 200 ohm at the balun connection point in the centre making the unbalanced impedance nominally 50 ohm. No transformer action is required and the coax line can be 50 ohm throughout

The slotted tube balun departs from perfect balance by a small amount at resonance because of physical asymmetry at the dipole terminals due to the normal position of the shorting post opposite one leg of the dipole.

This may be improved by placing the shorting post elsewhere in the slotted region. If this is done the impedance seen by the unbalanced connection will be one quarter of the balanced impedance at the post point. This will be the dipole impedance reduced by an amount determined by the distance that the post has been "tapped down" the wing of the balanced slotted assembly. The impedance at the connector will then be that impedance transformed by the section of line between connector and the post.

The split tube balun is the most

Continued on page 10



Dipole is connected to outer only.

Coaxial line with narrow slots $\frac{\lambda}{4}$ long. Impedance = Zo

Dipole is connected to both inner and outer through post.

Impedances: Assume a voltage 'Eb' at the dipole terminals. At the post end of the coax line 'Eu' will be half Eb. As no power is lost:

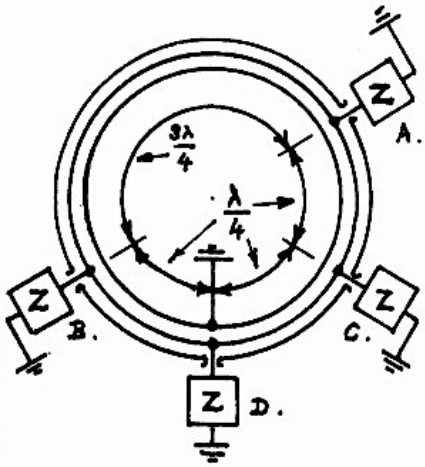
$Pb = Pu$. $\therefore \quad \frac{Eb^2}{Rb} = \frac{Eu^2}{Ru}$

and: $\frac{(2Eu)^2}{Rb} = \frac{Eu^2}{Ru}$ so: $Ru = \frac{Rb \times Eu^2}{4 \times Eu^2}$

$\therefore \quad Ru = \frac{Rb}{4}$

At the connector $Zc = \frac{Zo^2}{Ru}$

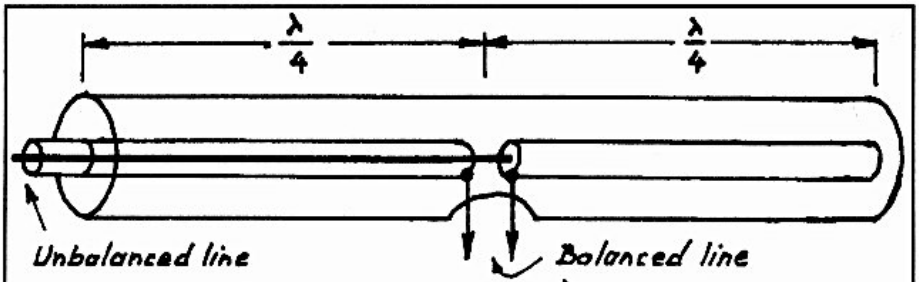
Fig. 6. Slotted Tube Balun



Impedance of all lines is $\sqrt{2} \times Z$

Refer to Text.

Fig. 7. Standard Rat Race



This is a Bazooka with a $\frac{\lambda}{4}$ shorted stub. attached so as to provide physical balance.

Fig. 8. Co-linear Balun

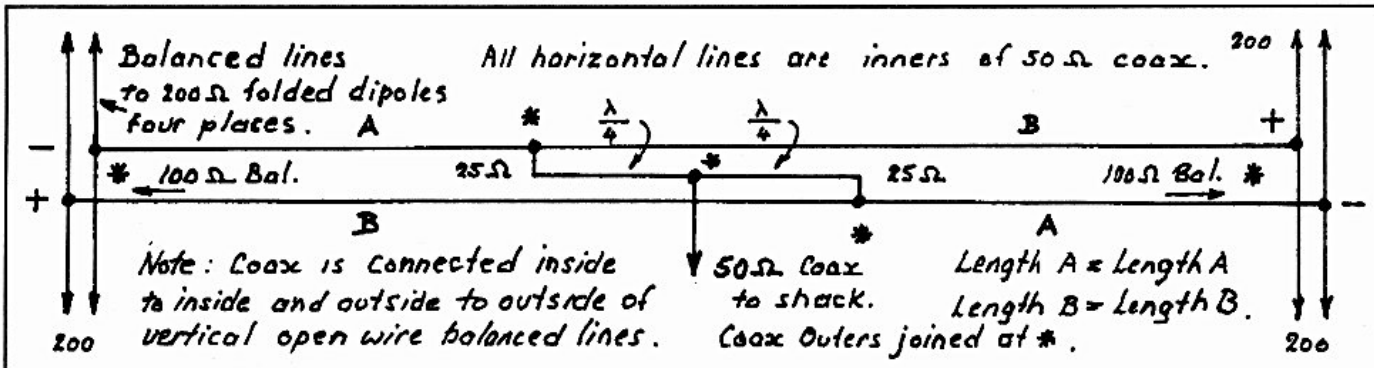


Fig. 9. VK2ZAB Balun.

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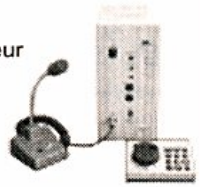

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AO-40 Dual Frequency LS Dish Feed

John Roberts VK4TL
(Located in Tolga near Atherton , North QLD)
Email radcool@tpg.com.au

The 2401 MHz Part

Many of you have struggled to match a helix and then wondered if its integrity is OK. What about getting up to 1296 MHz or in this case 1269 MHz. If you have been experimenting you will find that you get pattern distortion from physically supporting the turns. As the frequency goes up so does the problem. Well in this article solutions are provided for mechanical stability and concentric dish feeds for 1269 MHz and 2401 MHz together with a new way of constructing the matching tab capacitors.

Many of you will have started with the ARRL helix design for 2401 MHz. Building it as per the details and not having the testing ability we wonder, even though it appears to work, whether it is working properly. We have no power source at 2401MHz to feed the SWR bridge even though we may have an SWR bridge such as a Daiwa or suchlike. Some of us may have something special here. What have others done, well the same as myself dig deep in the old pocket and got a G3RUH patch. What next, yes it's too nice to leave out in the weather we will copy it. Guess what it works about the same. I'm making no exaggerated comments. Some of the inspiration then comes from Robert W0LMD and his web site entitled Dish Feed Systems, www.ultimatecharger.com/Dish_Feed.html .

Robert is in the world of Tri-Band dish feeds for AO-40 and his 22 page article is inspirational. It was the first time that I learned about circular polarisation with a patch antenna. If you have scoured the Internet for information on patch antennas, as I have, then you will find that although there are practical details, tests have proven that some designs have no circular polarisation. Use the details from W0LMD's website, entitled "Dish Feed Systems" for the patch. Now the concept is so good that you can't throw it away and therefore buying the proven patch from G3RUH could not be put aside no matter how much it cost. For me it was expensive. I bought the G3RUH before testing the one built from Robert's article. Shucks!

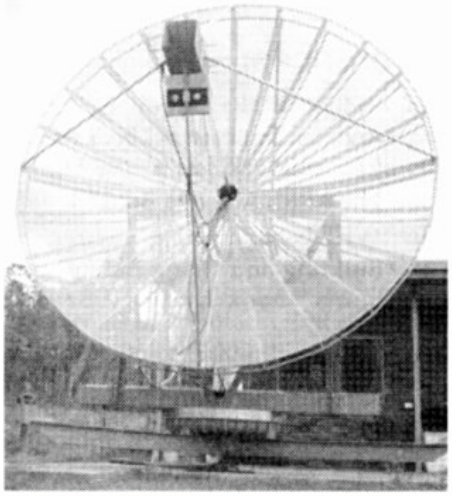

Photo 1. 3.7 Metre Dish at VK4TL.

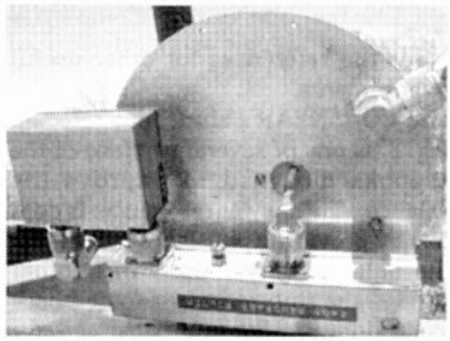

Photo 2 Patch Feed, Filter and Converter, 144 out Bottom Left and 1296 Input to Helix Top Right

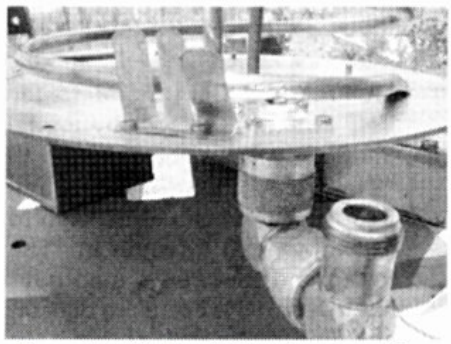

Photo 3 Helix Feed Showing Capacitor Matching Tabs.

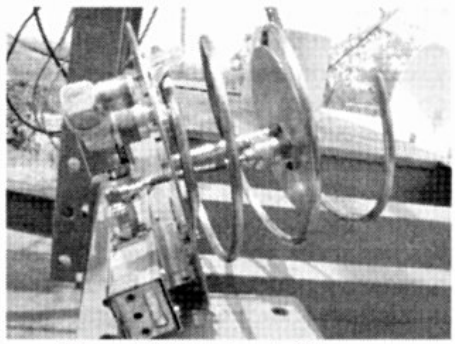

Photo 4 Helix, Patch, Filter and Converter Mounted at Dish Feed.

The Desensing Issue

OK I have got the 2401 MHz. part of the dual feed out of the way now except for the filter. To transmit on 1269 MHz may desense 2401 MHz so I tried on the bench and it did. I had bought a Down East Microwave Xtal for 100.004 MHz and have an oscillator signal source permanently going 'down in the shed'. An IC1271 supplies up to five watts to a helix inside which is a patch antenna connected to the converter which is a Kuhne DB6NT 2401/144. Yes it desensed.

I searched the Internet for a filter. I thought that with all the extra activity with spread spectrum there would be something appropriate. The filters I found were far too expensive so I got down to it and produced a five section interdigital filter in a few hours. It all came out of my junk box.

Briefly a silver plated brass box 32mm wide with the fingers made from stand off pillars already drilled and tapped then cut to length. The filter was tuned up on my oscillator signal and inserted directly in the receive path as close to the patch as possible. The 1269 was switched on and at 5 watts there was no sign now of desensing. The details of the filter are available from many different sources. I used the German UHF compendium part 3 & 4 page 614. All

fingers are 24mm and I used "N" sockets. That problem is now out of the way. If you use separate antennas, elevating on say a KR500 elevating rotator, the filter will probably not be required but with concentric dual drive for a dish it is required.

The physical set up is shown in photo 2

Mechanical Integrity of the Helix

I have built a few helical antennas over the years. The biggest one was over 6 metres long for 144 MHz. One of these antennas was for 1296 for a beacon. I remember that it worked so well, but I did not record its details although the difference it made was profound. When we get up to 1296 and a helix of three turns then the whole three turns are expected to be supported by the 'N' socket. At this frequency everything near or touching the turns will do two things. One it will distort the pattern and two it will change the matching. As such the very best is not to have forward support. My helix starts earthed to the ground plane and at 73mm from this connects to the 'N' socket.

This is shown in photo 3. The helix is wound from one quarter inch copper tube. It is flattened at one end and bent so that the tube is about 2mm above the ground plane. Drill a hole in the flattened portion to bolt to the ground plane. Measure 73mm from the hole that secures the end of the first turn to ground. Drill a hole at this point that is just a nice fit for the "N" socket solder connection through only one side of the tube. With the solder place of the socket pushed inside firmly you will see that it will not short to ground here. The ground plane is made of sheet brass. It was made 190mm diameter and the helix fastened to it at the appropriate places. That is earth and 'N' socket fastened with, on the helix side, brass or stainless steel hardware. If you tap the threads for these screws then the helix can easily be removed in the future for whatever reason. Now using a 50 watt soldering iron solder the "N" socket to the copper pipe. . The socket position on the inside of the ground plane increases the separation tube to plane for the right height criterion.

Placing the 2401 MHz Patch inside the 1269 MHz Helix

Have you been looking for the helix diameter, yes well surprise, surprise, it's about double what it should be which allows the 2401 MHz Patch to comfortably sit inside. Now remember the old days when you wouldn't dream of putting a metal boom inside the helix. What trouble I went to with my 144 MHz helix finding a marquee tent pole to do service as a boom. I need not have bothered. Helix antennas with metal booms are described all over the place. I'm sure Colin Richards' (9M2CR) chopstick one didn't use a metal boom. OK the diameter of the helix is 150mm and the turn spacing 50mm. The mechanical stability has been dealt with using two fixing points and quarter inch

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Six co-axial baluns for VHF/UHF antennas

Continued from page 6

versatile of the three baluns described and convenient for some applications but it is physically complex and cannot be easily waterproofed. However the slotted line does not have to be air spaced.

Three *uncommon* baluns which may be used by amateurs

A standard RAT RACE balun is shown diagrammatically in Fig. 7. This hybrid ring is the big brother of the common half wave balun. If the impedance of all the coax lines is 75 ohm, the impedance of the loads at all ports is 75 / 1.414 = 53 ohm. Note that ports 'B' and 'C' are 180 degrees apart and if these form the two sides of a balanced load with the centre earthed and if port 'A' is used as the input/output we have a 2:1 impedance matching balun. It should be noted that this only obtains when the ring is complete. The load at port 'D' will only dissipate out of balance power. It does not affect the balanced ports.

There are several versions of the rat race.

See the references for other useful arrangements.

The CO-LINEAR balun, illustrated in Fig. 8, is one of several versions of the bazooka designed to improve the balance efficiency at resonance. It does this by providing physical symmetry at the balance terminals. In another version the stub section is folded back to lie alongside the input quarter wave section and the two are enclosed in one sleeve.

The VK2ZAB balun, illustrated in Fig 9, was designed to feed the two balanced loads seen at the centre of vertical open wire lines connecting the dipoles of the top and bottom Yagis of each pair of a two alongside two stack. In the diagram, the horizontal lines are all inners of 50 ohm coaxial cable. The outers are omitted for clarity but are all bonded together at the points marked [*]. The impedances which are obtained at each junction are shown on the diagram.

References:

Baluns in general:

"Antenna Engineering" book edited by Johnson and Jasik.

"The ARRL Antenna Book"

Ferrite HF baluns:

"Building and Using Baluns and Ununs" book by Jerry Sevick W2FMI.

Three Common Baluns:

"Antenna Theory and Design" book by H. Paul Williams.

Slotted Tube Baluns

"Microwave Antenna Theory and Design" MIT book. Editor S. Silver

"Slotted Dipole Impedance Theory" RL report No 772 by H. J. Riblet.

EIA Antenna / Feed:

"A Proposed Gain Standard for VHF Antennas" Paper by R.F.H. Yang.

"The ARRL Microwave Experimenters Manual" RF Hybrid Networks R. G. Manton in "The Radio and Electronic Engineer" Nov./Dec. 1984. For more data on anything in this article contact the author on VGMCD@ bigpond com

ar.

tube. Next being able to position the two antennas has been solved and the focus and phase point for the system can be the same for both 1269 and 2401. Polish the tube before bending. The helix earth point and the "N" socket are on the circumference of the helix. Photo 3 may explain.

Matching the Helix

Why is it that I cannot find any sophistication in matching systems applied to helix antennas? All the articles are far too dismissive. The old approach is a section of 75 ohm coax line to transform 140 ohms to 50 ohms. I'm sure you will have already decided that you don't know if it is 140 ohms to start with. There are reservations that at this frequency the pattern would be upset with some current flow on the outer of this matching section. The tabs way would seem to be the best choice out of the only two proffered. Experiments were tried with matching screws threaded through from the rear of the ground plane but in the end I came back to the tab. Soldering tabs on and off the quarter inch tube was not the most enjoyable exercise. I thought why not put the tabs on the ground plane. The prototype was built with six "tin can" material caps in a row and screwed down with three nuts and bolts. Instant success.

Putting It Together

Clean and polish the tube then give it some coats of Incrolac. I am looking for a drinks cooler (Esky) that will make a suitable radome for the antennas ahead of the ground plane. The rear will be in a housing or box to keep the converter and filter out of the weather.

The helical antenna has three turns, which determines the dish illumination. I make no claims for what it does but my 3.7 metre dish has an F/D of 0.45 and I hope that this does the job. The tab capacitor on the finished model was made initially to fit on the screws that fix the 'N' socket. This was not successful no doubt due to the RF currents at this frequency requiring direct earth paths. The material was thin brass sheet cut with shears and fixed to the ground plane with two screws right up against the "N" socket and positioned so that the tabs can be bent towards the first turn. Three capacitor tabs or fingers were found to be OK. The patch can be secured with brass rod threaded internally at each end so that the patch will be located at the approximate phase centre of the helix. You must make a hole in the ground plane at a point under the "N" socket of the patch to allow access for an "N" plug. The interdigital filter is secured with a bracket to the rear of the ground plane and the Kuhne 2401/144 converter is directly attached to the filter, which has been built with a male "N" outlet. When winding the helix as an AO-40 dish feed make sure that it travels anticlockwise away from you and the ground plane end. This is for use as a dish feed where reversal takes place in polarisation.

You Are Almost Enjoying Mode "L" On AO-40

The housing box was removed from the dish and taken to the workbench. The system including the filter with final tuning locked down and MKU 24 Oscar converter were installed inside. The helix had a final trim and then was installed on the dish at an offset of 300mm below focal point which is reserved for more important experiments (says he). Two days went by without a suitable pass on AO-40 and as the satellite transponder was off. I was hearing this huge beacon signal. The time of reckoning came 18th Nov. 2002 and with about 3 watts at the dish I worked VK3TBC followed by VK2RW. Now after experience in uplinking on 70cm with a linear feed to the dish and up to 300 watts available I came into stable, non Leila, non-fading operating, a tremendous relief. Leila will move ex high power mode "B" operators to mode "L". Was I? The next days operations confirmed that the system was working properly with contacts all over the place including Jamaica W6FOG/6Y5. There is no SWR to be seen on the Daiwa Bridge in the shack and I have now removed it from the line. The IC1271 that had previously been peaked for 1296 has about 5 watts output on 1269. I expect to add an M57762 Mitsubishi RF brick to give up to 18 watts and leave the rig tuned as it is. See you on AO-40.

Useful Websites

W0LMD www.ultimatecharger.com/Dish_Feed.html

G3RUH www.jrmiller.demon.co.uk

DB6NT www.kuhne-electronic.de/english/frameset.htm

Down East Microwave www.downeastmicrowave.com/

Original publication John Roberts VK4TL on Phillip Charlier's website at www.reefandrainforest.com/

Photos and web design by Phillip Charlier phillip@reefandrainforest.com)

John Roberts Email radcool@tpg.com.au

ar

Over to you

Towering victory

Amateurs in Victoria at least and who may be having trouble with their local Councils in relation to the erection or use of a mast or tower, will be pleased to learn that a in recent case at the Victorian Civil and Administrative Appeals Tribunal (VCAT), the Tribunal held that no town planning permit was required for a mast 13.7 metres in height.

Some Councils, notably Casey City and Banyule City, have held that such a mast is a "Telecommunications Facility" and accordingly needed a permit. VCAT has, in a strong judgement, decided otherwise.

I would suggest that anyone who is having trouble should visit the VCAT website, and look up the decision which is listed at the following address:- http://www.vcat.vic/gov.au/2003-vcat-pl-402.htm

The written decision made on 10 April 2003, gives full details of the reasons behind the judgement, and may well serve to assist amateurs in other states.

The case may also be of interest to amateurs in other states, where the town planning legislation may be similar to that in Victoria.

Don Jackson VK3DBB.

Brush-up your Morse and join in the action

Drew Diamond, VK3XU
45 Gatters Road, Wonga Park, 3115.

When it was announced that the U.S. Coast Guard had dropped Morse critics of the mode were saying, "It's official. Morse is dead because the U.S. Coast Guard don't use it any more". However, our parameters are very different from the commercial world, and that's the key word, "commercial" = commerce = for money. Certainly Morse is no longer commercially viable, as there are now much cheaper ways of sending messages to and from ships at sea, aircraft and remote stations. But we don't communicate for financial gain. We do it for self-training, technical investigation, public service, the challenge, and for enjoyment and relaxation (Refs 1 and 2).

Interestingly, hardly a week goes by without my hearing, at radio meetings, or on-air, the remark; "I must brush-up my Morse". The motive presumably comes from individual realisation that CW Morse (CW from hereon) remains a powerful communications tool, one which is well worth maintaining on our bands. The technical and operational advantages of CW are well known, and have been extensively aired in this and other journals (e.g. Refs 3 – 8), and need not be repeated here. Suffice to say that amateur CW is very much alive, and continues to prosper on the low end of our HF bands, 1.8 MHz and 6 m and 2 m, where the mode is used for both local and DX contacts. On 14 MHz for instance, particularly when conditions are good, it can be 'standing-room only' from 14.001 to perhaps 14.060 MHz. For QRP operators and those with modest stations (typically less than 100 W and basic wire antennas), CW may be the only effective simple mode for DX work.

For persons with a desire to improve their CW skills, an often stated (and probably valid) complaint is that the CW bands seem to be occupied by 'speed demons', there being very few conversational contacts to be found which are below about 10 or 12 W.P.M. Unfortunately, some 'expert' operators either cannot (or will not) slow down to accommodate a new or rusty operator. In order to encourage new enthusiasts, a helpful amateur should try to send at a speed which is commensurate with the ability of the other fellow, because such exchanges offer real support to learners keen to improve their skills.

Quite good and useful CW work can be done at perhaps 10 W.P.M., but it is generally agreed that the mode may be more fully enjoyed at higher speeds. Things really start cooking at speeds above about 12 or 14 W.P.M., and naturally it becomes easier to find more contacts as skill improves. In this "I want it and I want it now" age, it seems to have become unfashionable to attempt anything that requires work and dedication. This attitude is perhaps summed up by Homer Simpson's advice to his son Bart, "if something's hard to do then it's not worth doing". As far as is known, there is no easy way of gaining speed and proficiency in CW except by hard work and practice.

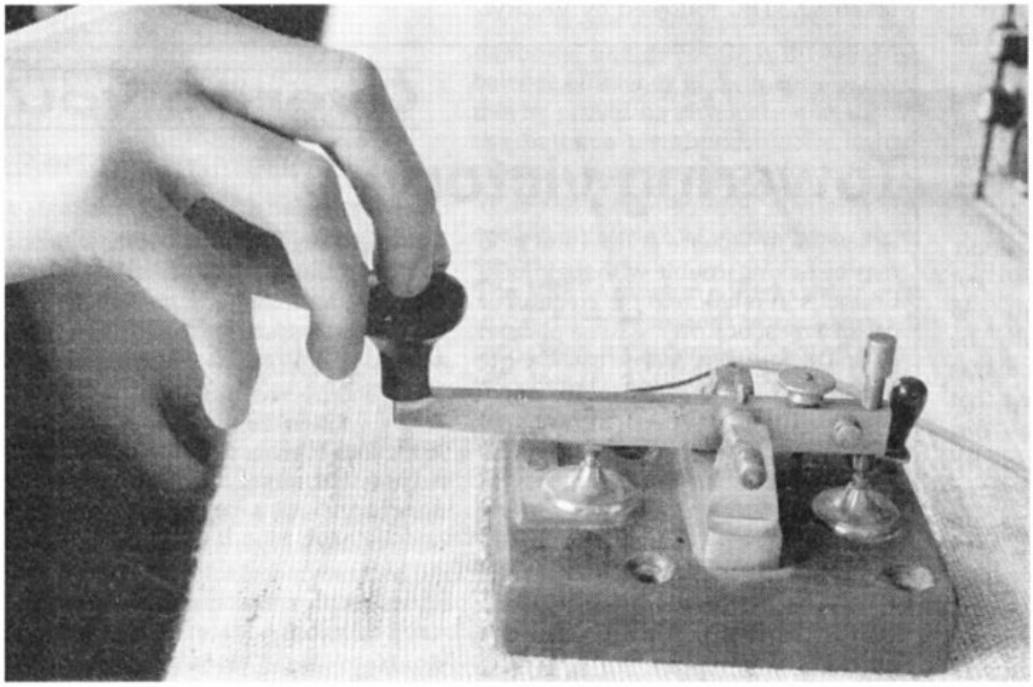

Photo 1

Receiving

If you are still with me after that news, you may be thinking "fair enough, but where do we get the practice?" There's lots of material. Tapes are adequate, but off-air is more like the real world. For instance, the VK2WI Dural practice beacon on 3.699 MHz and 145.650 MHz is a good one — plain language at a range of speeds, and so also are

the nightly W.I.A. sessions on 3.550 MHz starting at 0930 Z. Do as much listening as you can on the CW portions of the HF bands. Listen-in to the low end of 3.5 MHz any night of the week, and between 7 and 8 AM Eastern Time for the "Early-bird" practice net on 3.539 MHz (newcomers welcome).

Try 7 MHz, between about 7.001 and 7.030 MHz, either very early in the morning, or late afternoons and evenings (there is sometimes a little CW activity during the day). 7 MHz is particularly active on Sunday mornings between 0000 and 0200 Z during the "CW Net". 14 MHz provides a rich harvest. This band is usually open to Europe and North America in the afternoons and well into our evenings where slower operators seem to favour 14.040 to about 14.060 MHz ('Fists' CW Club members may often be heard on 14.059 MHz at moderate sending speeds). The A.R.R.L. broadcast excellent practice sessions (with the "works", including punctuation) from W1AW at 1300 Z on 14.0475 MHz. 5 – 15 W.P.M. Mondays and Wednesdays, 15 – 35 W.P.M. Tuesdays and Thursdays.

If you can listen down on LF, see how many navigation beacons can be identified between about 200 kHz and 400 kHz. Also, tune-in to the HF beacons on (say) 14.100, 21.150 and 28.200 MHz, where the various transmitters may be heard "chiming-in" cyclically during their allotted time-slot. It is interesting to note the distant call areas that may be heard at different times of the day, and these provide excellent receiving practice. And don't forget your local radio club, many of which broadcast CW practice sessions for students in their area.

Sending

When sending CW, we are not setting out to win a race, or impress the neighbours. We are trying to convey information. Speed is not the whole thing, but quality is the goal. Excellence in sending must always come first. With practice and perseverance, speed will gradually improve. And some days may be better than others. Always remember, the mark of a good CW operator is sending which is not necessarily fast, but is correctly spaced, rhythmic and contains the right number of dits and dahs for each character. No one enjoys having to decode a jerky, rushed, badly formed racket which is riddled with errors; it's just too much like work. However, when your sending is correctly formed and pleasant to copy, then the world will be queuing up to work you, and radio friends will stop you in the street to offer compliments on your sending style.

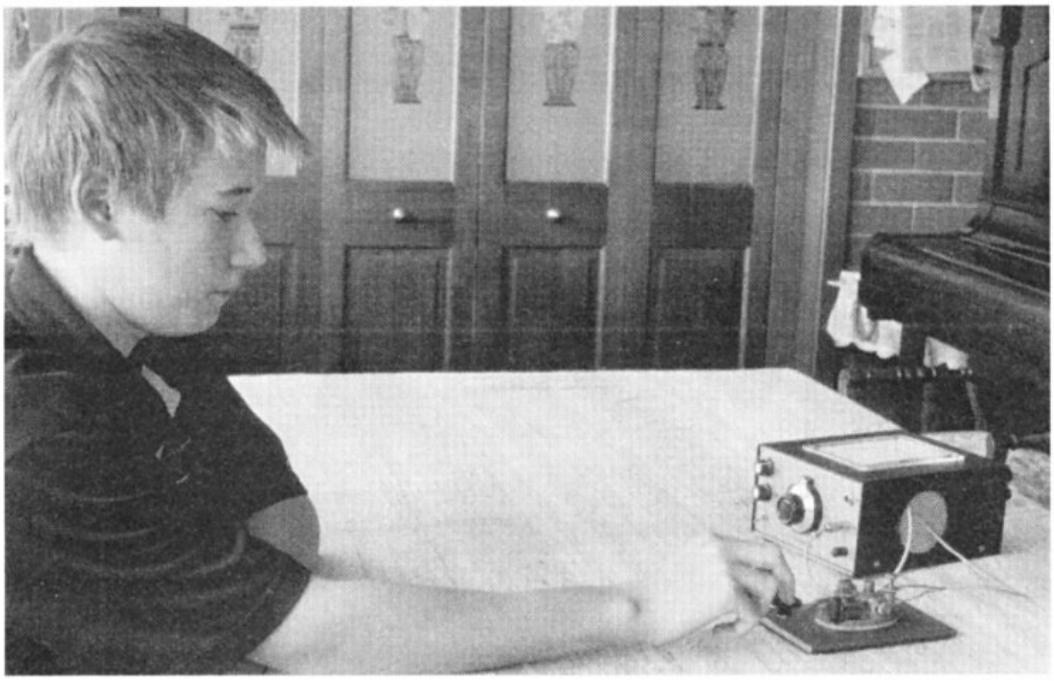

Photo 2

There are basically two common types of hand key; the familiar (to most of us) B.P(ost) O(ffice) or A.P.O. pattern (Photo 1), and the American pattern (Photos 2 and 3). If you have the opportunity to try different types, select a key that is comfortable at first go; you can always change to another kind later on.

The key contacts should be adjusted initially for a gap of about 0.3 – 0.5 mm, or the thickness of a card. Tension of the return spring must be found by experiment: if the tension is too great, the operator will tire too easily, and if the tension is too small there is risk of losing the correct rhythm. I like to think that the wrist muscles and spring tension are "tuned" or "matched" when a string of dits or dahs can be produced which are almost effortless and properly formed (Ref. 9).

A Post Office style key should be fixed at or near the edge of the operating table. The height of the chair should be such that the operator's lower arm is horizontal when the fingers are placed upon the key knob. Upper arm should hang almost vertically down the side of the body. Sit squarely at the table with your back straight and both feet flat upon the floor.

Everyone seems to acquire his or her own method of "pounding brass" (see QSL card). However, there is a "correct" arrangement of the fingers for the P.O. key, which is depicted in Photo 1. Index and second fingers are placed in a relaxed manner upon the top of the knob, thumb and ring finger touch each side (perhaps just slightly under the knob), and little finger is free (Refs 10 and 11).

An American pattern key may be used in a similar manner to the P.O., but more correctly it should be located at a comfortable distance from the table's edge, as depicted in Photo 2. Note that only the elbow rests upon the table, lower arm and wrist should not contact the table during sending. It may be found of benefit to place (say) a 100 x 200 mm rectangle of carpet under the elbow. Photo 3 shows finger placement; index and second fingers upon the knob, thumb on the side (perhaps slightly angled under the knob), ring and little fingers free (Ref. 12).

For both key types, manipulation should come from depression of the

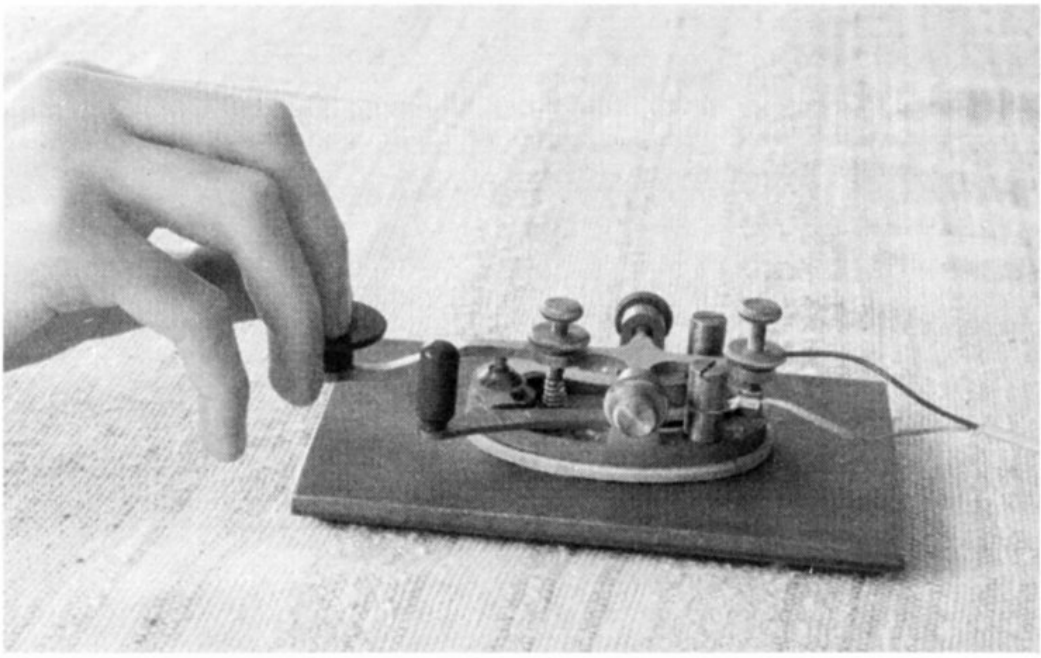

Photo 3

fingers and wrist, there being little arm movement, only that produced by the downward motion of the wrist. The relevant wrist and finger joints may be initially trained by sending strings of dits and dahs until it is easily done. Then try alternating the dits and dahs in a didahdidah.... pattern. At no time should the pace be forced or rushed. Dexterity and speed should improve naturally and gradually with regular practice.

Choose sending practice material, which uses all letters of the alphabet and numbers. If you like music, have some fun sending; MISSISSIPPI, TENNESSEE, BENEFIT, BEEFESSENCES and BEST BENT WIRE. Although punctuation is not an exam requirement, it is handy to know full-stop (didahdidahdidah), comma (dahdahdididahdah), question mark (dididahdahdidit) and forward slash (dahdididahdit) because real CW traffic uses these. You will also need dash (dahdidididah), which is used as a general-purpose filler-in and thought separator (um, er) during conversational CW.

Tape-record your sending from time to time for "quality assurance" in order to correct any bad habits, which may creep in. Some common sending errors are: running certain letters together (like PD instead of AND, NST for TEST, and NAG for NAME), adding extra dits (5 for H, and 6 for B), and dropping dits (S for H and H for 5). If you can't copy your own sending, how are others expected to?

For most of us, speeds beyond about 18 W.P.M. (on a good day, with a tail wind) of good quality are hard to achieve with an ordinary hand-key. Electronic keyers make CW even more enjoyable, and allow the operator to cruise along at a cracking pace without fatigue. It is hoped to make these devices the subject of a later article.

Going On-air

As receiving and sending speed improves, so should confidence to the point where at last it is felt that an on-air CW contact may be attempted. The best way is probably a prearranged "sked", either with a mate in a similar position to yourself, or better still, with a more experienced operator that you know will treat you with kindness and patience, and who (hopefully) can offer constructive comments on your sending style, or "fist". If possible, choose an uncrowded part of an appropriate CW band.

By convention (not always observed), CW operators should send at a speed, which is about the same as the station being "worked". Therefore, when putting out a "CQ" call, or in replying to a call, try to send at a speed at which you would like to continue the contact. That is, if your top speed is (say) 10 W.P.M.; don't call at 14 W.P.M., because the other fellow may (quite rightly) assume that you can do 14 W.P.M. If the other operator is going too fast for you; send "PSE QRS" (please send more slowly).

When we studied for the sending exam, it was pounded into us not to forget to send "message begins"; CT (C and T joined; dahdidahdidah) and "message ends"; AR (didahdidahdit). However, CT is seldom used on air today, as it is rather superfluous (it's a bit like saying; "I say..." and then saying something). Most operators simply start (you may hear dididididahdit (VE) which is a similar "ahem" to CT). Message ends (AR) however, is very useful, and tells the other station that you have concluded your "over", and to get ready to reply. Even to this day, there is no standard form in the use of AR. Most operators put it at the end of the message, but before the call signs. Let's say I'm working Jim, G6ZO, and am about to put it over for his reply. I would send; HW?

AR G6ZO DE VK3XU K" which translates to; "how did you receive that? Message ends G6ZO this is VK3XU go ahead.

Although a CQ call does not contain a message (as such), many operators put AR at the end of a CQ call e.g. CQ CQ CQ DE VK3XU VK3XU AR. However, the more usual is to end a CQ call with a K (K means "go ahead" or "over" or "invitation to transmit"). If you are only interested in receiving replies from DX stations, then the call may be something like; CQ CQ CQ DX DE VK3XU VK3XU DX K. You will occasionally hear; dahdidahdahdit (KN), which is an invitation to a specific station to reply (all others please keep out). Unless you are the station nominated, do not reply. Unfortunately, KN seems to be the most misunderstood signal of all, but use it if you think it will help. For example, when a DX band is "wide-open", VK's are very popular, and some stations may only catch your call sign and K, and assume that you have called CQ, and start calling you and thus interfere with the station you have been working. A "KN" might work (but often not, I'm sad to say). It is meaningless to send "KN" at the end of a CQ call.

As with 'phone operating, have a good snoop around the band first, to see what's happening. If a contact is desired, it may well be that you will hear a station calling CQ, or the tail end of a contact where you would like to work one of the stations just signing (but see next paragraph). When calling a station, send his call-sign once or twice only, then your call-sign twice or three times, then K or AR (he knows his own call-sign what he wants to hear is your call sign).

Although none of us "own" frequencies, it is quite correct, when finishing a contact with a station which was on the frequency first (you replied to his CQ for example) to move off that frequency, even if you get a "gaggle" of callers at the end of the contact. The "owner" may sportingly send; "it's yours", or "GA" (go ahead), in which case only then may you use the frequency for a new contact. Similarly, when concluding a contact with a rare or unusual station (even if it was "your" frequency) the courteous thing to do is move away if they get a gaggle of callers.

One of the most annoying practices is the "endless CQ". You know the sort; we've all heard them, long strings of seemingly endless CQ's, when all you want is the call sign. To avoid unnecessary interference, CQ calls should be short and to the point. The 3 by 3 (three CQ's, three call signs) is usually regarded as the "standard" form. Of course small variations are fine. A form that I have had success with is three CQ's, then three call-signs, then 2 by 2, then 1 by 1 then K.

Before putting out a CQ, it is important to monitor the frequency for a little while first. If it appears to be free, send "QRL?" (are you busy?). You may hear "YES" or "WAIT" (didahdididit) or "C", which is short for "YES". If there is such a reply, find another frequency and try again.

To save time there are many standard (and non-standard) abbreviations used for CW work. A few have already been mentioned. Some of the more common ones are: TKS (or TNX), PSE (or PLS), ES (and), WID (with), WUD (would), WL (will), WX (weather), HW (how usually means how did you receive my message?), FER (for), R (received and understood), UR (your), HR (hear or here) in addition to all the usual Q-codes. Most radio handbooks and operating manuals contain a fuller list.

During a normal contact, it is usual to take a few notes or, if the whole message is written down, to underline points which require a reply.

A common dread with learners is in sending long or difficult words. Try not to get too fussed about this. Always use the simplest word that will do the job. But sometimes there is no apparent alternative. Some operators write the word down beforehand, which is excellent if you have time. Otherwise, simply do the best you can, or invent a mnemonic "on the fly". For example, assume the word "probably" is needed. If instead you send "PBLY", the other fellow will get your meaning. Another method is the break the word into separate parts in your mind. Let's suppose the word "understandably" is needed. It may be separated into UNDER- STAND-ABLY, but sent without the gaps, thus making the whole word.

When a contact is concluded, the signal for "end of work" is VA (dididididahdidah), which is sent at the end of the final transmission. For example, in finishing my contact with G6ZO, I might send; TKS FER ANR INTERESTING QSO JIM - 73 ES CU AGN SN AR G6ZO DE VK3XU VA E E. Those two little dits are a sort of friendly little wave, which many operators often tag right at the end of an enjoyable contact.

Summary

For many technical and operational reasons, Morse CW continues to be actively used on the amateur bands. It

Continues on 17

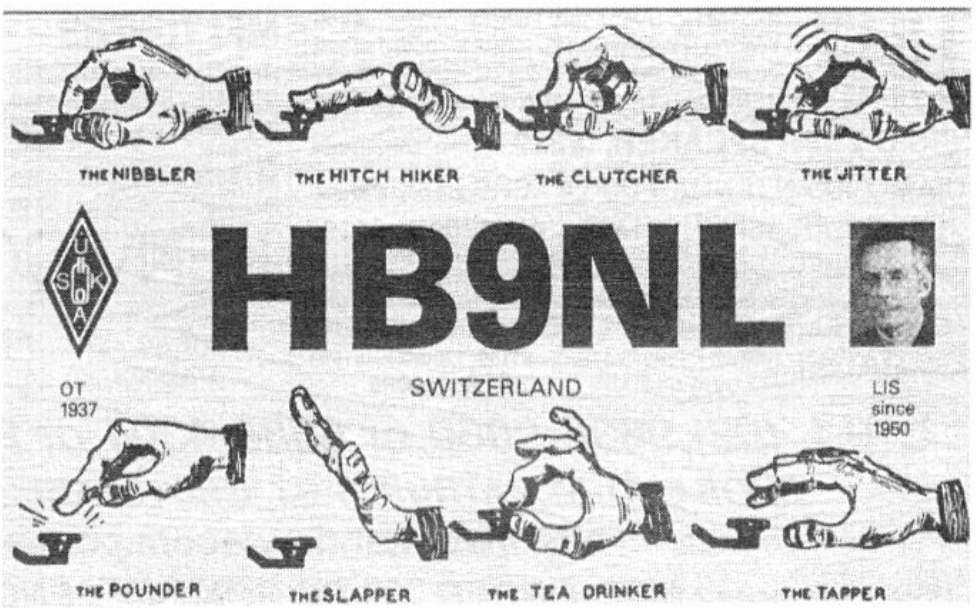

Photo 4

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Transceiver-Computer Interfacing

Many transceivers now have provision for connecting the transceiver to a serial port of a computer so that they can be controlled using the computer running suitable software.

The transceiver ports, however, need an interface circuit to the computer serial port that is an RS232 serial port. Many transceiver ports are using TTL levels that are not compatible with the computer serial RS232 port. The solution is to use an interface and these are available from the transceiver manufacturers. You can make your own as they are relatively simple circuits. Information on interfacing and some suitable circuits appeared in the *In Practice* column of Ian White G3SEK in *RadCom* for December 2002.

Generic interfaces for both Yaesu and Kenwood are shown in Fig 1. The Yaesu interface, Fig 1(a), is simple using level shifters to connect the transceiver to the RS232 serial port. A practical circuit using a MAX232 to generate true RS232 levels is shown in Fig 2. The two electrolytics C5 and C6 are usually 10 microfarad 35 VW tantalum, but some other makers' MAX232 varieties may allow lower values.

A Kenwood generic interface is shown in Fig 1(b) and a simplified version in Fig 1(c). These require inverters in addition to the Level Shifters. The simplified version loops back the hardware handshaking and may be suitable

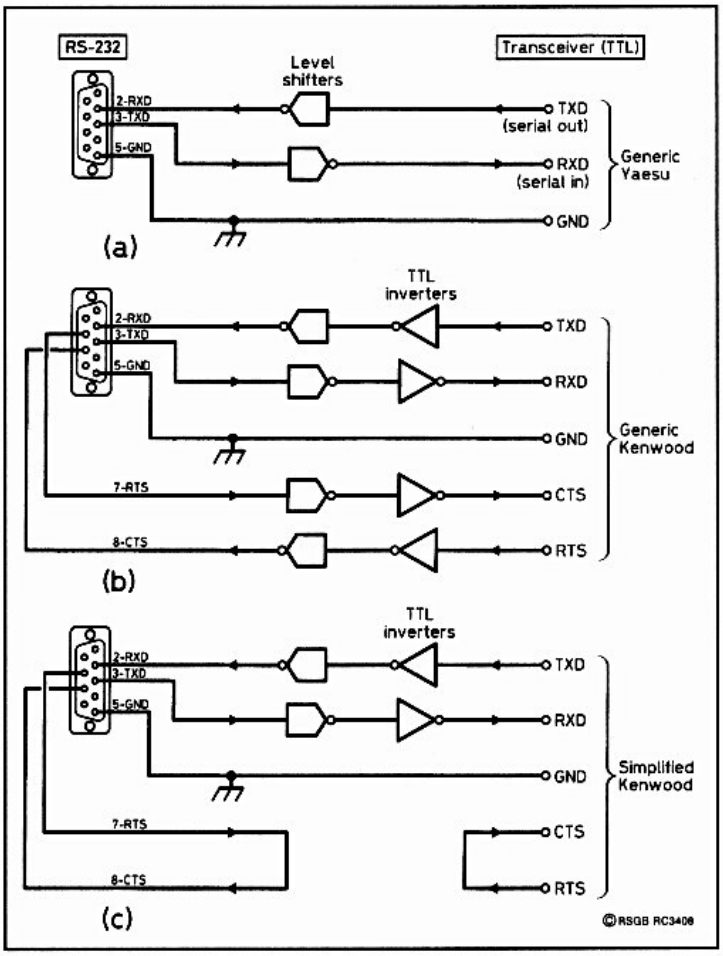

Fig 1. Generic RS232 Interfaces. (a) Three wire Yaesu. (b) Five wire Kenwood with full RTS – CTS handshaking. (c) Simplified three wire Kenwood with handshaking emulated by CTS-RTS linking at each end.

Brush-up your Morse and join in the action

Continued from page 15

appears that a significant number of amateurs, having passed the 5 or 10 W.P.M. Morse CW test (or having allowed previously held skills to become "rusty"), are willing to "have a go", but lack the necessary confidence to use CW on-air. Salient guidelines have been presented to assist such persons to reach a higher sending and receiving speed necessary for a fuller appreciation and enjoyment of the mode. Some hints on contemporary operating procedures have also been outlined.

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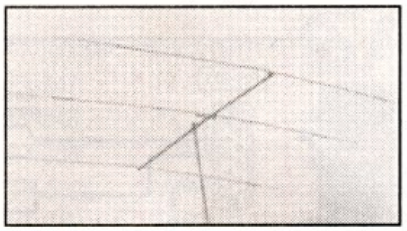

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Voltage: Internal: 5-7.5 VDC External: 12-16

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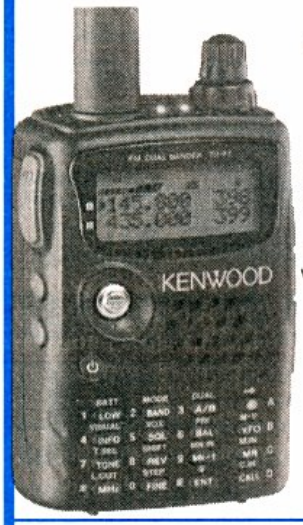

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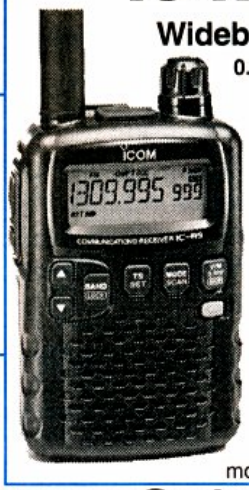

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for use with many Kenwood rigs and software types. For a practical circuit you only need to add inverters in the TTL lines between the MAX32 and the transceiver serial lines in the circuit shown in Fig 2. Six suitable inverters are usually contained in one IC and are readily available. If you need the full interface as shown in Fig 1(b) this would only require two MAX232 ICs and one hex inverter chip. The power supply would be adequate for this.

Interfaces may also be somewhat simpler as computer serial input/output circuits often can operate without the full RS232 signal range. You can often also derive power from the serial port to run the interface circuit. These are not as noise immune as the circuit of Fig 2. However, for short screened leads they may be adequate. A practical Yaesu/Icom interface circuit deriving power from the computer serial RS232 port is shown in Fig 3.

Icom use a single wire bus with bi-directional data. The data is in the form of packets, which are addressed to the transceiver, allowing several rigs to be paralleled. To use the interface circuit of Fig 2 you link the TXD and RXD at the transceiver side as shown. The Icom CI-V bus is shown in Fig 4. A similar bus is used by Ten Tec.

For more information and links, Ian White G3SEK has a website which has a lot of information on this and other topics at www.ifwtech.co.uk/g3sek.

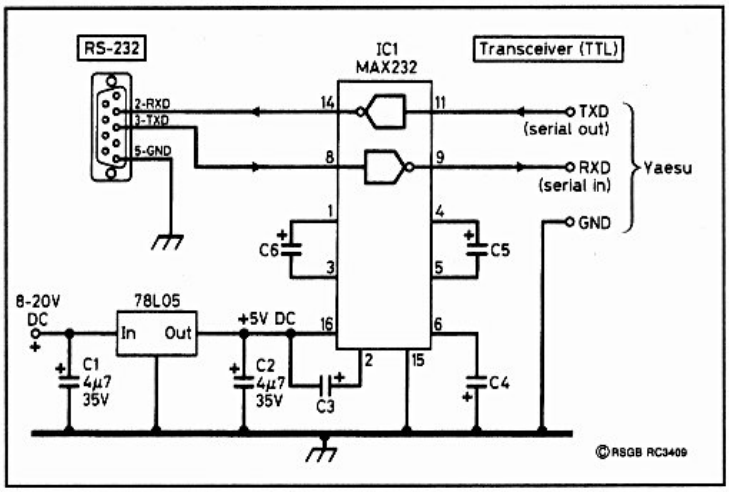


Fig 2. Practical Yaesu interface using MAX232. C5 and C6 are 10 mF 35 VW tantalum electrolytics. Some makes of MAX232 may allow smaller value capacitors, so check the data sheet.

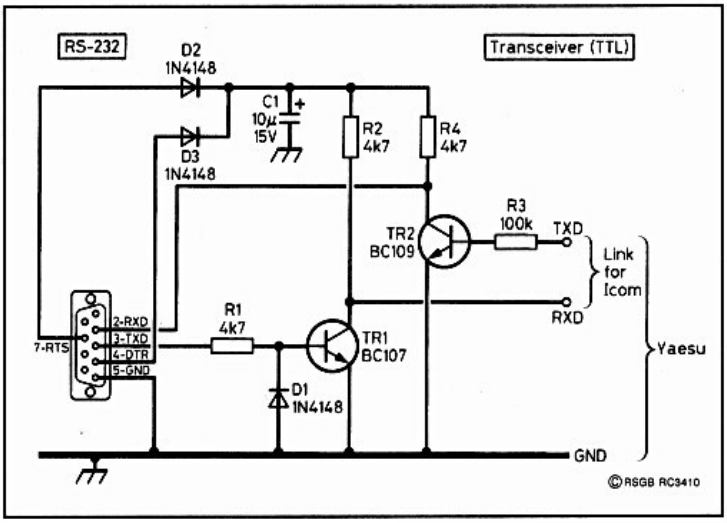


Fig 3. Practical Yaesu/Icom interface deriving power from the computer serial port. Link is for Icom CI-V single wire data bus (see Fig 4).

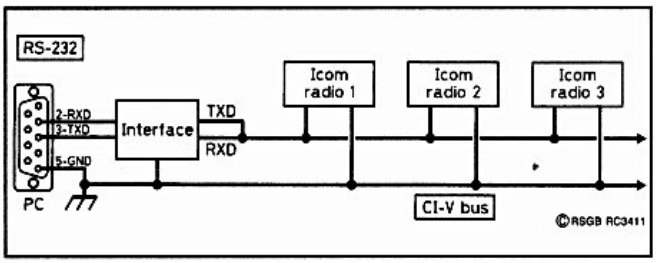


Fig 4. Icom single wire plus ground CI-V data bus allowing multiple rig control. Also used by Ten Tec.

Terminated Vee Beam

A simple broad band antenna was described in *CQ* magazine for September 2002 by Arnie Coro CO2KK in his *Antennas* column. Arnie CO2KK attributes the antenna to Dr Jose A. Valladares PhD, who showed him how to use it in 1961.

The antenna is a sloping Vee beam supported by a mast of 15 metres (50 ft approx) which slopes down to approx 6.5 feet above ground. The antenna is terminated at the ends and the example described covered the 6, 10, and 12 metre bands and also, with reduced performance, 15 and 20 metres.

The antenna is shown in Fig 6. A side view is shown in Fig 7. Two sloping wires 20 metres long (67 ft approx) slope down from the feed point to terminating resistors two metres (6.5 feet) above ground. The other ends of the terminating resistors are joined by a connecting wire. The resistors are in the range 250 to 500 ohms and should be non-inductive types capable of dissipating around 30 % of the power used. The apex angle is between 30 and 60 degrees. The angle should be closer to 30 degrees if 6 metres is the primary interest, but can be widened toward 60 degrees if the lower bands are of more interest.

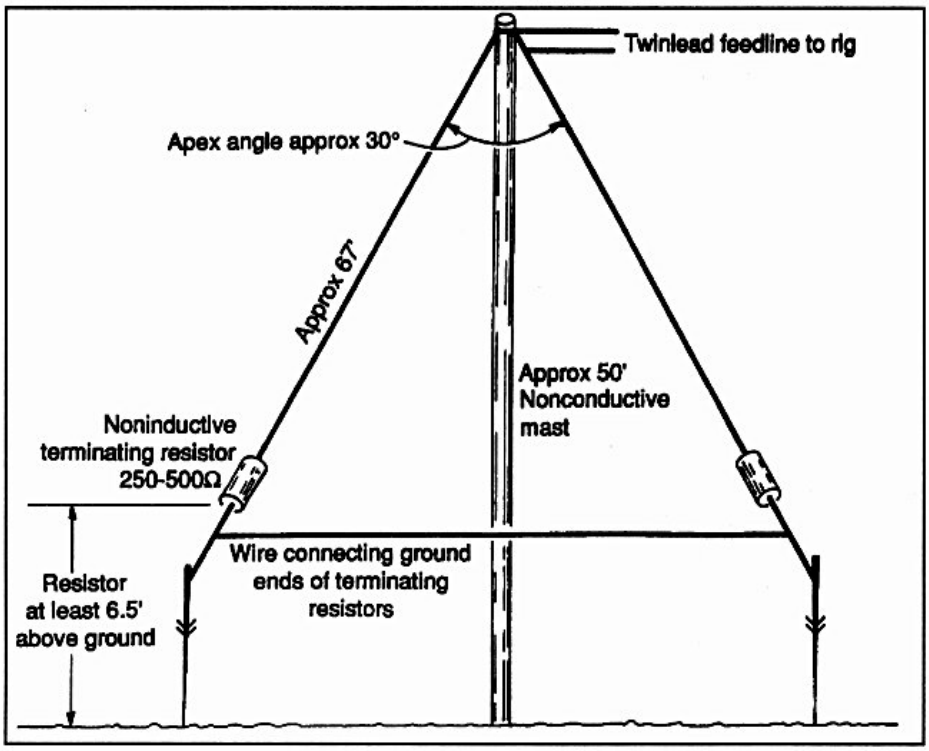


Fig 6. Terminated Vee beam.

The feed line used was 450 ohm open wire line to a 4:1 balun feeding a tuner in the shack. With some experimentation you could probably find a combination of apex angle and terminating resistors which would allow reasonably low SWR operation with a balun at the feed point over a wide frequency range.

Arnie CO2KK has used the antenna for pointing in a favoured direction for 6 metre and 10 metre DX. The antenna beam is in the direction from the mast support through the midpoint of the line between the terminating resistors.

If a metal support mast is used then the apex of the Vee where the feed-point is suspended should be a minimum of one metre from the metal support.

The advantage of this antenna is the wide bandwidth allowing operation or monitoring on a range of frequencies with directivity and some gain.

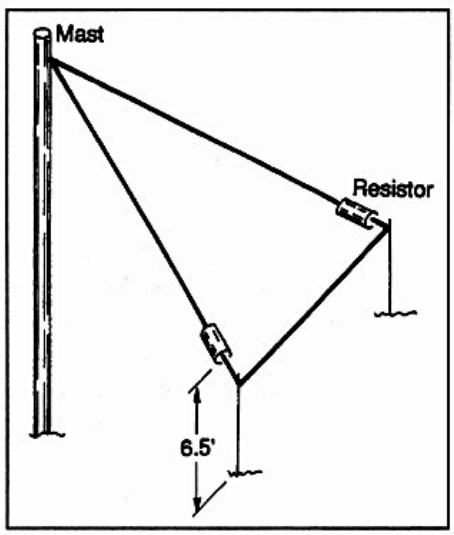


Fig 7. Side view of terminated Vee beam.

Cable Entry

There are many ways to get antenna and rotator cables into the shack. You can simply run them in through an open window, but this has some problems as a permanent arrangement.

Drilling holes in a window frame is another way, but it can be messy. In the *Antennas* column of Peter Dodd G3LDO in *RadCom* for December 2002 the problem was addressed and Peter showed how to provide a neat entry point through a brick wall. This was in response to the need for a tidy cable entry to satisfy the domestic management.

Peter drilled a number of holes in the brickwork so as to allow a plug to be removed thereby enabling insertion of a 40 mm plastic pipe to be used as a cable entry. Many handyman power drills provide a hammer setting, which allows masonry drills to be used. These are ideal for drilling holes in a brick wall. However, most domestic drills can't handle a bit which would drill a 40 mm or 50 mm hole. This is overcome by drilling a sequence of holes around the circumference of the desired hole size to accommodate the plastic pipe to be used as the cable entry. The drilling pattern can be seen in Fig 7. The irregular gap around the pipe can then be filled with mortar to give a neat finish.

The cables leading to the entry point can be contained in a length of plastic cable duct fastened to the wall. This material can be obtained from electrical wholesalers. The result will be a neat cable entry with the cables contained in the duct.

One point when dealing with cables is to use connectors which will not result in problems and which are relatively easy to terminate. The old style PL259 is not ideal and soldering them can result in a fairly unsatisfactory result. There are UHF connectors available which are terminated in a manner which is similar to Type N connectors and these are much more satisfactory. The principal improvement is in the use of the same type of clamping as used in other connectors such as the type N and BNC type connectors. Such connectors are available from a number of advertisers as well as from other suppliers. They are well worth the extra cost and effort in obtaining them.

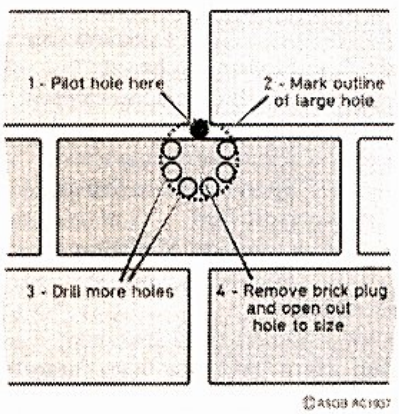


Fig 7. How to make a 40 mm or larger hole through a brick wall to allow insertion of a plastic pipe to serve as a cable entry point.

NOTICE TO CONTEST PARTICIPANTS

JMFD 2003 LOGS

Logs sent by email have been lost due to HDD failure and not backing up Logs received onto FDD (as was done last year). Would those stations that had submitted email log please re submit to: esr@powerup.com.au or esr01@optusnet.com.au by 23rd August 2003.

Or if you known of any stations that you had worked in the contest who might have used email to send in their log, please pass on the info, thanks.

Eric Fittock VK4NEF
JMFD Contest Manager

Ham Shack Computers

Alan Gibbs, VK6PG
223 Crimea Street, NORANDA WA 6062
Email: vk6pg@tpg.com.au

Part 28 –Frequently Asked Questions

Since this column started in April 2001, email messages continue to flood the writer's in-box from all over Australia almost on a daily basis. The majority of messages are FAQ's (Frequently Asked Questions) on "how-to" install and setup software on a myriad of computer platforms. By far the most prolific questions highlight Computer Viruses (AR 4/02), Computer Noises (AR 10/02), Computer Security (AR 4/03) and combating spam rather than specific Amateur Radio related questions. Whilst this publication is about supporting Amateur Radio enthusiasts and not about computers directly, it now highlights the impact of computers upon the AR fraternity. Readership is growing especially with the Ham Shack Computers Web Site where readers can access past copies of articles and hunt for, or download the software featured each month. The following reader topics have drawn the most on-line debate with the writer.

1. Computer Noise (AR 10/02)

Most AR operators suffer from these problems depending upon equipment installed in the average ham shack. AR 4/02 dealt with the topic in depth, but some readers found they still have problems. Try to keep the computing equipment away from the AR gear. This means separating the computing leads from antenna leads and installing a station earthing system. Start tracking "birdies" with the DigiPan (1) waterfall feature and do some detective work slowly. Remember, with free software and several evenings mucking around moving things around the shack will produce excellent low-noise results. G3SEK in RadCom 6/03, pp80-81 offers good advice on what he calls The Equipotential Strip. However, the writer suggests using a long flat bar of brass screwed to the rear of the shack desk, suitably tapped along its length, and short lengths of thick insulated earth braid (made from old RG58 coax) connected to each AR shack item - including the computer case.

2. Computer Security (AR 4/03)

The writer said that if readers ignored the suggestions offered under this heading then "Stay off the Net"! Many readers agreed and were relieved to find solutions for long suffering virus, spam and nasties that seemed to pour from the Internet every hour! Most computer users have bought their new machine and just use all the default software supplied by the vendor. If the computer fails to work, they take it somewhere to be fixed! However, things are always changing in the computer world, and in the end readers will need to follow the trends. Steve Ford WB8IMY (Editor of QST - The Journal of the ARRL) has written a superb article in QST 5/03 called "You've Got Spam". Well worth the read, and includes references to the top four for Windows:

MailWasher at: www.mailwasher.net
MailShell-SpamCatcher at:
www.mailshell.com/spamcatcher
McAfee SpamKiller at:
www.mcafee.com/myapps/msk/
DeerSoft SpamAssassin Pro at:
www.deersoft.com
For Linux users try **Mailfilter** at:
mailfilter.sourceforge.net or
ScanMail at:
www.scanmail-software.com

Mac users have not been forgotten either, they can try **Spamfire** at: www.matterform.com or **Spamsieve** at: www.c-command.com/spamsieve

3. Annoying Pop-Ups

These nasty little pop-ups (unwanted windows) that keep appearing on top of web pages and are annoying adverts, game play solicitations, sexual promotions and the like. What's needed here is a "Pop-Up Blocker", Hi

For Windows XP users Tweak UI for XP clobbers these instantly so you can enjoy ad free surfing. Tweak UI XP is available from the CD that comes with the July 2003 issue of Australian Personal Computer Magazine. In addition, the same CD has all the "tweaks" for Win95, 98, 2000 and ME as well, but for all these readers will have to buy a copy of the magazine. Incidentally, for readers wishing to protect, customise, optimise and personalise their Ham Shack Computers, the same issue of the APC Magazine offers over 180 tips, fixes and tricks, and hundreds of dollars of software all for less than $10 from your newsvendor.

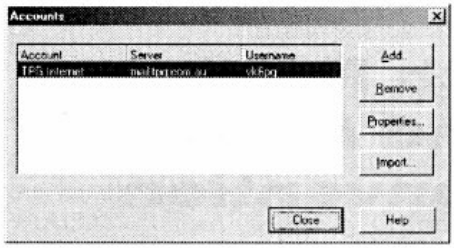
4. MailWasher Setup

This topic confused many readers so let us take another look:

Once connected to the Internet, MailWasher "peeps" into your own mailbox at the ISP and lists the messages waiting.. The list is displayed on the MailWasher screen and offers the options to Delete, Bounce or Blacklist messages. At this stage, the messages are still on to ISP mail server and your computer is safe from them. If you "click" onto any one of the messages in the MailWasher window, the download process is started and the message can be read. DO NOT DO THIS, as it's too late in saving your computer from undesirables.

Delete unwanted mail, Blacklist those who are persistent spammers, and Bounce only those that are regular offenders. Use the Bounce option sparingly for habitual spam and check the Blacklist to avoid repeated attacks from the same source.

To setup your account in MailWasher, go to Tools, Account and enter your Account Name, POP server address and Username like the window shown above as programmed for the writer: Your own entries might be:



Account - Server - Username
OziMail - mail.ozimail.com.au - vk4te

Hit the close button and MailWasher is ready to do it's best in filtering your own mail from now onwards.

5. Kerio Personal Firewall

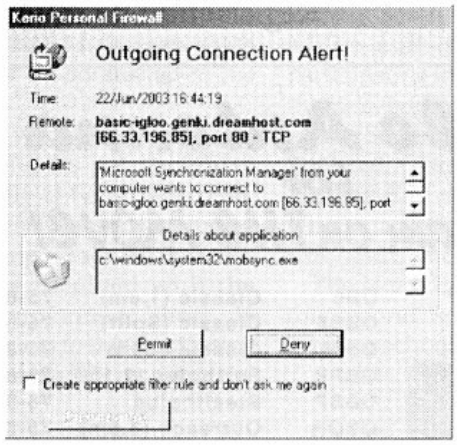
Kerio is more for the experienced user, and a defence shield against hackers looking to "connect" with your computer seeking your personal details, landing cookies into Windows and the like. Advertisers in particular are looking for you to dump their product information everywhere on your computer. Kerio (1) downloads as a self-extracting file, which should be placed in a temporary folder. Just "click" the filename and the Kerio installer will guide you through the setup process. For Windows XP users ALWAYS set the Windows Firewall to inactive and the Kerio Administration active. Deny anything that connects to you that's unrelated to what's happening with your machine. Permission's are give as a group of activities. An example being that permission is authorised when connecting to EchoLink, your own ISP, Microsoft Messenger and other regular activities including your own POP server for e-mail.

6. Hackers, Spam & Viruses

Hackers and spam messages should now be a problem of the past if readers have followed the threads so far. However, viruses come in many forms and might me attached inside downloaded files, part of the software you bought from a shop, came from a friend's floppy disk, or the kids brought it home on a floppy disk copied at school. The solution being to run up-to-date virus scanning software such as Norton AntiVirus 2003 or freeware from AVG (1). Trust no one - not even the kids! If the kids play games on your computer, well, you asked for it! If they do want to play games, buy them a computer of their own. That way they won't stuff-up your computer.

7. Is the above Kerio alert image a nasty problem or not?

Not really once the processes are understood. It looks like a "nasty" but it's trying to synchronise a IE bookmark to view a web page off line. To Permit and set a rule for the site (www.vkradio.com) check the box to create the filter rule, then "click" the Permit button. Read the alerts very carefully before the Deny is chosen. In the above example, the request to synchronise the page points to c:\windows\system32\mobsync.exe - opening the mobile sync plug-in for Windows. Once permitted as a rule for further sync operations, other pages can be synchronised in the future. What seemed to be an alert problem was a word of caution that can be permitted.



Summary

This topic has featured the major issues face by readers. There are dozens more of course but with limited space in this publication, they are better addressed by e-mail back to the inquirer.

Many readers have asked for back issues of Ham Shack Computers. All are now available on CD-ROM - including the major software packages featured in this column. For interested readers anxious for copies, send a postal request to the writer enclosing a $10 note to cover costs and postage.

Ham Tip No. 28. Check the Ham Shack Computers Web Site for software and links described in this series and/or e-mail the writer.

Ham Shack Computers, Part 29 - "Backing Up" discusses modern ways to keep all your data safe and sound without breaking the bank!

(1) Ham Shack Computers Web: http://www2.tpg.com.au/users/vk6pg

73's de Alan, VK6PG

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Over to you

More on "the Licence"

As an Amateur who did it the hard way all those years ago, I could see all the grizzles about the Foundation/Entry Level Licence coming up all over again. Did we not see it with the introduction of the "Z" calls, the "K" calls and the "H" calls?

I believe some of the suggestions made by other writers to this column are worthy of consideration.

1. Wait till the Morse is abolished by WARC 2003 and see what it does for prospective Amateurs.
2. Compulsory membership of the WIA for a Licence.
3. Make the Foundation licence a combination of the "H" and "N" licences with similar concessions re, bands, modes power etc.

I will not comment on what this may do for Amateur radio, others have done so in their letters.

Steve VK5AIM
70 years old and still keen !
President of the Elizabeth Amateur Radio Club.

30 years young!

The 16th North Queensland Amateur Radio Convention

September 19, 20 & 21, 2003
James Cook University, Douglas Campus

Hosted by
The Townsville Amateur Radio Club (Inc).
PO Box 333, Garbutt East QLD 4814
Phone 07 4779 7869, Fax 07 4779 1161
Packet: TARC@VK4RAT.#NQ.QLD.AUS.OC
Email: vk4wit@wia.org.au

something for everyone!

— Ladies' and children's activities, Car boot sale, Trade displays, technical lectures, Home Brew Contests including Technical and Arts and Crafts, Club Station facilities available, sightseeing in local area.

For further information and costs, contact the TARC (details above).
Registration deadline: 29 August, 2003

Mobile Antenna for The Ham on THE MOVE!

Outbacker Communications
PH (08) 9455 4288 Fax (08) 9455 4289

OB8	Classic (1.8m)	75-80-40-30-20-17-15-12-10	$315
OBS8	Classic (Split)	75-80-40-30-20-17-15-12-10	$375
OB8500	Classic 500 W	75-80-40-30-20-17-15-12-10	$350
OBPP	Perthplus (2.1m)	75-80-40-30-20-17-15-12-10-6-2	$360
OBSP	Stealthplus	75-80-40-30-20-17-15-12-10-6-2	$312
OBOR	Outreach (3.6m)	75-80-40-30-20-17-15-12-10	$414
OBJoey	Joey (.9M)	75-80-40-30-20-17-15-12-10-6-2	$299
OSB	Base & Spring	Heavy Duty Mount 3/8" UNF	$147
OB09	Survivor	VKS737-RADTEL-RFDS FREQUENCIES	$300
OB18	Survivor	VKS737-RADTEL-RFDS-RADIODATA	$400
TAHFBS	Base & Spring	Heavy Duty Mount 1/2" Whit	$147

The Ultimate Shack Mate

Alpha Delta PathFINDER provides continuous coverage tuning from 1.8 thru 30 MHz plus 6 metres. Ideal for amateur radio as well as MARS, CAP and commercial-government uses,it runs under microprocessor control with an average tuning time of 3 to 4 seconds--automatically.

The digital readout is a precision multi-function bar graph/numerical display that simultaneously reads RF watts (5 thru 200 watts), peak and average, VSWR and all tuner functions. The digital meter provides 5% accuracy plus 1 digit of ANY reading, not just full scale.

Front panel pushbutton switched outputs for coax, long wire or balanced line antennas--usin designed built-in balun. Select between 2 coax or 1 coax and 1 long wire/balanced type anten

10:1 SWR tuning range on HF and 3:1 on 6 meters. Much wider than typical built-in transceiver tuners. Will match coax outputs 6 thru 800 ohms and long wire/balanced outputs 24 thru 3200 ohms (HF). Will match a wide variety of antennas. 200 watt power rating on HF and 100 watts on 6 metres with 50% duty cycle. Requires 12 VDC at 1 amp. 7.5 x 2.5 x 11 in. 5.5 lbs.

As well as the digital readout, audio beep responses for SWR and other functions are assist the visually impaired. Data cables for popular transceivers will be available, but not required for automatic operation.

PO BOX 1197
(11 MCelligot Court)
CANNING VALE WA 6155
www.outbacker.com.au

Adelaide Hills Amateur Radio Society

Geoff VK5TY gave a very interesting talk this month, about the way in which the WIA(SA) obtained the Burley Griffin Building as their clubrooms, and the difficulties encountered and overcome to convert a rubbish destructor furnace into a meeting hall. If you can imagine what the inside of the furnace looked like after 20 or 30 years of rubbish burning it will give you some idea of the problems involved.

Having been involved in the investigation of a number of other possible properties on offer, as well as the actual conversion, the talk was quite far-ranging and amusing. Some actual plans of the before and after and photographs of some of the really beautiful concrete work with which Walter Burley Griffin decorated all his structures added to the evening.

The latest newsletter for AHARS has been sent by email to many members and will be available in hard copy at the mid-year dinner in July. It is also available for download, on the AHARS website http://www.qsl.net/vk5bar/2003-Jul.htm

The website is worth a look at anyway, with a rogue's gallery of photos etc.

Lower Murray Dinner

A very successful dinner was held in a country pub, the Callington Hotel, recently. There were 21 present and while we were slightly crowded we chose to be that way so we could all be together. It was a lovely meal and a very happy evening. It wasn't possible to get a photo of everyone but a number were taken by Lionel VK5ACW.

The Lower Murray Club is, strictly speaking, a part of AHARS but it has a clubroom where it runs a station for JOTA and conducts some of its meetings. Clubs like this illustrate the companionship offered by amateur radio everywhere.

Richard VK5KRB and friends at the Callington Hotel

North East Radio Club.

David Clegg VK5AMK, Hon Secretary
vk5amk@chariot.net.au

On Friday 13th June we were treated to a talk by Andrew VK5ZUC on the topic of MRI and Ultrasound imaging techniques used in treating conditions of the human heart. The talk was illustrated by a power point presentation showing various ailments. The meeting got off to a shaky start when we found the power off to all the local suburbs. Amateur ingenuity to the fore and we had portable lights rigged up all round the hall; fortunately the power was restored in time to run the projector for Andrew's talk.

A Chicken and Pizza night was held on July 11th for our AGM, this saw some fresh and younger blood elected to the committee.

Training nights were also held in July for WICEN operators who wish to operate in the Rally of South Australia.

The August 8th meeting will include a talk on Fox Hunting presented by Keith VK5OQ. Keith is involved with the Scout Radio movement and is introducing the scouts to this fascinating part of our hobby. Also this month is the Rally of South Australia. Amateurs from NERC and many other clubs are participating in this event to be held over the weekend of August 9th and 10th.

The September meeting is yet to be finalised, October is a visit to the West Torrens Railway Museum, November will be a Quiz night and December a BBQ and some Fox Hunting practice.

The North East Radio Club meets on the second Friday at the Ardtornish Primary school, Saarinen Ave St Agnes.

Postponed: Official opening of the Townsville Channel 8 UHF CB Repeater

The Townsville Channel 8 UHF CB Repeater was to have been officially opened by Peter Lindsay, MP for the Federal Electorate of Herbert, on 31st May 2003, but this was not possible.

The Townsville Amateur Radio Club (Inc) President Gavin Reibelt, announced "The establishment of the Channel 8 UHF CB Repeater for use by the community within the Townsville-Thuringowa region marks yet another function of service to the community by Amateur Radio. Media are invited to attend at the Amateur Radio Repeater Site, Mount Stuart, and record this historic event."

The Channel 8 Townsville/Thuringowa UHF CB Repeater, callsign TAC08, is a co-operative venture by local amateur radio operators, local radio equipment businesses, local leaders of the community, national regulators and national equipment suppliers. Radio transceivers donated by ICOM Australia Pty Ltd, Yoshi/VK3BYX. Procurement by Navcomm Electronics, Barry/VK4TBD and Lucia Duplexing equipment and antenna purchased at trade price through Townsville CB, Geoff Farnell and Kerry/VK4TUB. Filter alignment by ITACS EMC Test Lab, Don/VK4MC. Licensing and accommodation by The Townsville Amateur Radio Club (Inc) with help from Peter/VK4TO MP for the Federal Electorate of Herbert and the Australian Communications Authority.

Repeater TAC08 is available for use by anyone in the community equipped with an ACA approved UHF CB transceiver for voice communications. For reliable coverage, usage of transceivers with power output of 5 watts is recommended.

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Beyond Our Shores

David A. Pilley VK2AYD
davpil@midcoast.com.au

Ham gear sales scam uncovered

You know those unsolicited scam letters from Nigerian royalty asking your help in getting money out of that nation? The ones that offer you a percentage if you are willing to help? Well Amateur Radio NewsLine listener Bill Whitney, N7CD, passes along word of a similar hoax now running around our world of Amateur Radio. In a posting on eham dot net by Mark Stennett, NA6M, he warns to watch out for offers to buy your gear with a cashier's cheque from someone who claims they are owed money above and beyond the price of your sale and has a cashier's cheque in that higher amount. The person offers to send you the cheque if you will wire back the difference. This, while he or she is arranging for someone to pick up the equipment you want to sell. You receive the cashier's cheque. It looks real so you deposit it and send the purchaser the difference. Within days you are informed that the cheque is forged and the lending institution holds you responsible for the entire amount. You are not only stuck with the gear you were trying to sell but a big bill owed to some bank as well. Caviat Emptor. That means buyer beware.

(ARNewsLine)

Ionosphere Studies

We received a letter from Florio, IW2NWB, who is the Co-ordinator of the Sky Wave/Inosfera project. This project is supported by the European Space Agency in a study of Space Weather focusing on the many interactions between the Sun and Earth.

They are seeking volunteers from the Amateur fraternity to assist with this study. More information can be found on the ESA web site http://www.estec.esa.nl/wmwww/wma/spweather/

Or contact Florio direct at iw2nmb@amsat.org . It could be a most interesting project.

Royal Honour for PA0LOU

Congratulations to Louis van de Nadort, PA0LOU, who has been awarded the title Lid in de Orde van Oranje Nassau (Knight of the Order of Orange Nassau) on the occasion of the birthday of Queen Beatrix of the Netherlands. Lou received the honour for his outstanding work for the community of Radio Amateurs, in particular his work for IARU Region 1, of which he was chairman for many years.

Broadband over power line

It was interesting to read in July QST that the FCC continue to receive hundreds of electronically filed comments over their Notice of Inquiry concerning BPL technology being investigated in the USA. Over 500 of the comments filed were from the amateur community. The concern is the effect it will have on HF services as the frequency range considered is between 2 MHz and 80 MHz. The data rate is claimed to be up to 20 MB/s.

The major interference threat to amateurs comes from so-called access BPL because its signals can radiate from outside power lines possibly for great distances. Comments are due by August 6 with a reply by September 5.

(July QST)

Keeping our bands clean

In the USA the ARRL has Observer Officials that monitor the amateur bands to assist and advise U.S. amateurs that may have problems with their equipment on-air that they may not be aware of. With modern-day transceivers we no longer monitor our outgoing signals. Such problems as key clicks, bad CW notes, over modulation, etc. can only be heard by the receiving stations. No, they are not police and have no enforcement provisions. They are there to assist and hopefully keep our coveted bands clear of transmissions that do not fall within good engineering or operating practices. When they hear something wrong they send the station a card pointing out the problem. They also send cards for good operating!

Big brother is watching in the USA, but it is not something that has recently been introduced. The first OOs were appointed in 1920, revised in 1934 and again in 1980. In the early days OOs had to undertake a special course and it was necessary to have good frequency measuring equipment. Today it has been more streamlined with modern equipment. The FCC supports the OOs and from time to time haS used them to the advantage of radio amateurs.

(July QST)

If you have interesting news from overseas, please email it to davpil@midcoast.com.au

Real life Foxhunt

Jon Wornham, GD4RVQ, works as an Air Traffic Control Officer at Ronaldsway Airport on the Isle of Man. On May 1, Kinloss Air Rescue Co-ordination Centre called to say that a satellite had picked up a rescue beacon signal on 121.5 MHz, thought to be located about 6 miles south of the airport. Unfortunately, although equipped with D/F equipment, it was only set on airport frequencies.

Jon just happened to have his TH7E hand-held with him. He found the signal on 121.5 but also found it was S-9 on 243 MHz suggesting it was very local. Jon walked the airfield and found the signal was originating from the nose of an aircraft. Jon's quick thinking and Amateur Radio skills saved considerable cost and effort, negating the need for a full scale search and rescue operation.

(June RSGB RadCom)

Amateur radio fascinates a new generation

Lachlan Bruce, VK2LGB

I have recently obtained my Novice license at the age of 17 and would just like to thank all those Hams who encouraged my interest in radio and helped me through the exam process to achieve my callsign.

My Grandfather, George Bruce VK2GT, had me fascinated as a child with his large HF set and talking all around the globe. He received his callsign when he was my age, and I hope I will still be as active as he is when I am his age, 88. I was especially privileged to have been given my first Ham Radio, a little Yaesu VX-5r Handheld, from my Grandfather and it is used everyday to have a chat with him.

My Uncle Lloyd Bruce, VK2ELB who was questioned many-a-times in the lead up to the exams, and was always able to answer every question. Lloyd has been licensed since 1979 so there must be something about the radio waves that tune up the Bruce family.

Last but not least I would like to thank John Gibling, VK2EKG who allowed me to tag along to JOTA and get in the way. JOTA allowed me to get a first hand feel of the radios and how to get them all set up. John also helped me with many technical questions as well as study material, and is still supplying me with bits and pieces of gear to help me get set up.

Lachlan Bruce, VK2LGB (centre) with his uncle, Lloyd Bruce, VK2ELB (left) and grandfather, George Bruce VK2GT (right)

Once again, thank you to all that have helped me achieve this outcome, it was made a lot easier through all of you. I have also joined the Mid-South Coast ARC and appreciate the friendliness and good times I have already had. I am thoroughly enjoying this hobby and look forward to becoming involved in many more aspects of Amateur Radio.

ar

AMSAT

Bill Magnusson VK3JT

Latest on the AO-40 Interference in Perth

Last month I quoted from a BB post from Phil Harman, VK6APH. Phil has acted as co-ordinator for the efforts of the Perth group in tracking down and dealing with the recent interference to AO-40's "S" band downlink. Here is Phil's latest summing up of the situation. "As previously posted, the problem has been traced to inadequate image rejection of some 2.4GHz AO40 down converters when used with a 2 m IF. So far we have found two solutions to the problem.

1. Change the down converter local oscillator from low to high side injection. I use a G3WDG converter and Charlie very promptly provided me with a replacement crystal. This completely cures the QRN problem although it has the slight draw back that the down-link tunes in the opposite direction. I consider that a small price to pay to be back on AO40.
2. Choose a down converter with higher image rejection. In my particular location, about 1 km line-of-sight from a 3G base station, I needed >65dB of image rejection. After requesting image rejection figures from a number of manufactures I selected an AIDC 3731AA from Bob, K5GNA. Using this converter, and beaming directly at the base station, there is absolutely no trace of the previous S9+20dB signal.

Others are looking at fitting various filters to either the input of their down converters or adding a filter part way down the RF chain. More details as these designs materialise. I hope this information is of use to others if and when they encounter the new 3G phone service. It's great to be back on AO40!". Thanks Phil.

Ailing Satellites

The last few months has seen some rather dramatic events in the Amateur Radio Satellite Service. Several of our most reliable birds appear to have reached their use-by date. Let's hope we can look forward to better days.

UO-22 report

Following the demise of KO-23 and more recently KO-25, the only 9600 baud digital store and forward satellite in service was UO-22. It had been valiantly holding on to provide the digital group and the packet-satgate group with reliable store and forward communications for a long time. It came from the Surrey stable and we thought it would live forever! But sadly its batteries began to show signs of failure last year and the situation got progressively worse until now it goes to sleep during its eclipse phases and it may not wake up again after this current phase ends some time around August/ September.

UO-36, MO-46 report

Things are a bit grim in the 38k4 digital field too. UO-36 was closed down last year and now the only digital bird left working is MO-46. Its imaging systems are still producing fair to good quality images but it has never given the image clarity or resolution for which UO-36 was legendary.

PCsat report

This satellite has been hovering on the edge of extinction for a couple of years now. It's a credit to the control team led by Bob Bruninga WA4APR that it is still workable during periods when it is in full sunlight. A replacement (PCsat-2) is underway and will be launched from the shuttle or ISS some time later this year or perhaps next year due to delays caused by the shuttle disaster. PCsat-2 will also be devoted primarily to APRS and UI digital communications.

FO-29 report

Recently it seemed like FO-29 was lost forever. JARL FO-29 command team succeeded in recovering FO-29 on 16th June. Now it is sending a loud CW beacon and the transponder is also available. The command team said the problem was most likely caused by a spate of major solar flares. The command team would like to hear from amateurs who can collect telemetry data. Please send the telemetry reports to the command team via email at lab2@jarl.or.jp Mineo, JE9PEL, has an FO-29 satellite telemetry analysis program that will automatically analyse all digital telemetry from the satellite (such as current, voltage and temperature). FO29CWTE is available for download at the following web site: http://www.ne.jp/asahi/hamradio/ je9pel/

The "CubeSat" revolution

The recent launch of a batch of tiny "CubeSats", many with downlinks in amateur radio bands, created quite a furore on the AMSAT-NA bulletin Board. Opinion seemed to be just about equally divided between those who agreed with the idea of using the satellite segments of the amateur bands for the downlinks and those opposed to the idea. There is a further batch of some 15 such devices due for launch later in the year. They are nearly always creatures of some University or College course that is training people for work in the space industry. Those in favour used positive experiences like University of Surrey's UoSats and University of Marburg's involvement in our past high flying flagship satellites. Those against saw it as the thin end of the wedge in allowing "non-amateur" projects a slice of the amateur bands without any benefit or advantage to radio amateurs. At the time of writing, the debate is still raging. As is usual, once the feathers have settled, some good thoughts will no doubt come to the fore. People still have bad memories of the "Swatch" debacle of a few years ago and of the earlier BADR satellites. These non-amateur-radio satellites also used frequencies in the amateur radio satellite segments to downlink their telemetry. However, with

some degree of co-ordination between AMSAT and the various groups during the design phase it should be possible to have a win - win situation. We were lucky at the time to have high profile people like Prof. Martin Sweeting and Dr Karl Meinzer at the head of the Surrey and Marburg teams. Efforts are being made to consult with the team leaders but it may be too late for those already in the late planning or construction stages. Time will tell. It would be nice to hope for a positive outcome.

Treasures or Space-Junk

Following on from the above a new thread has opened for discussion and it is one which could have far-reaching ramifications. Frank Bauer KA3HDO brought up the subject, one that has worried many in AMSAT and in NASA and in the American FCC. To quote part of Frank's message: "I do have a big concern. One that I know is shared by the FCC. One that I have seen the AMSAT community talk about extensively. NASA is so concerned about it that they have developed policy on it. It has to do with keeping our space environment clean for all to use in the future. In other words, orbit debris. I have applauded Bob Twiggs work on the Cubesats. However, it has been my understanding that these satellites would be placed in a very low orbit...allowing the university to utilise these satellites for about their expected lifetime (<1 year, maybe more) and then they would burn up in the atmosphere. I must tell you that I was very upset to learn that these first cubesat satellites were going to be placed in an 820 km orbit". I won't quote Frank's message in full but he did include this table which may raise a few eyebrows.

"How long do you think the cubesats will be up there? Well, here are some predictions for various orbits:

800 km — 285 years
700 km — 66 years
600 km — 15 years
500 km — 3 years
400 km — 0.5 years
300 km — 0.1 years

So the latest cubesats will be there for probably more than 300 years!!. It is my understanding that there are over 50 universities working on these satellites. I think that we (universities, AMSAT, and all space enthusiasts) all need to pause and think about how to effectively utilise the two important precious resources we have in our possession—the frequency spectrum and the precious space orbits".

A real test of amateur receive systems

Back in November 1996 the Mars Global Explorer was launched and shortly after it left its parking orbit a 437.1 MHz beacon transmitter was turned on. The spacecraft was 20 days out and some 6 million km from Earth. Now that's a long way and you would need a good setup to warrant even trying to hear it. Despite that several amateurs "heard" the signal. "Heard" is in inverted commas because you can't hear a signal that far down by ear and in any case it was just a continuous carrier with no modulation. The best you can do is to detect such a signal on a DSP display. Several amateurs did this and their results were written up in the AMSAT Journal. Now, Mars Global Surveyor is in orbit around Mars and going about its job. It has a companion, Mars Odyssey. Beacon transmitters on both packages are again transmitting, now from Mars orbit. Radio astronomy facilities will be using these beacons to calibrate their receive systems. It's a lot more than 6 million kilometres away though. More like 200 million. Not many amateurs, even EME devotees will have an antenna and receiver system capable of detecting this signal, but it still may be possible. It will be interesting to see the outcome this time. I was not aware that any VK stations tried to detect the signal back in 1996. You would need to have a station capable of easily coping with the rigors of EME communication. Some AMSAT devotees have such systems. You would also need to have DSP software and a highly sensitive, low noise receive pre-amp. The current series of tests is already in progress but may be finished by the time this reaches your shack. Another series of tests is scheduled for late August so if you think your Oscar station's receive performance is up to the job, keep watching the BB for details. Remember, the satellite is in orbit around Mars, and in August Mars will be exactly on the opposite side of the Earth to the Sun and will in fact be closer to Earth than it has been for some 70,000 years. This situation has the astronomy circles buzzing with excitement of course as it will give astronomers their best ever view of the red planet. But it also means the best possible communication conditions for the Mars missions. If you want to point your antenna at Mars for the tests you will need an astronomical "planetarium" program to tell when the planet is in your sky and to get its AZ/EL position. Fortunately (or unfortunately) no amateur antenna system is going to have anywhere near enough gain to track the MGS around Mars. We'd best leave that to the big blokes. Pointing at Mars will be close enough for even the very best amateur installation. Up-to-date information will no doubt be posted on NASA's JPL web site under Mars missions.

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The AMSAT group in Australia.

The National Co-ordinator of AMSAT-VK is Graham Ratcliff VK5AGR. No formal application is necessary for membership and no membership fees apply. Graham maintains an email mailing list for breaking news and such things as software releases. Members use the AMSAT-Australia HF net as a forum.

AMSAT-Australia HF net.

The net meets formally on the second Sunday evening of the month. In winter (end of March until the end of October) the net meets on 3.685 MHz at 1000UTC with early check-ins at 0945UTC. In summer (end of October until end of March) the net meets on 7.068 MHz at 0900UTC with early check-ins at 0845UTC. All communication regarding AMSAT-Australia matters can be addressed to:

AMSAT-VK,
9 Homer Rd,
Clarence Park, SA. 5034
Graham's email address is:
vk5agr@amsat.org

VK1 News

Forward Bias

Peter Kloppenburg VK1CPK

You never have to go far in any direction to find a Radio Amateur who is involved in the forefront of communications technology.

This was very much in evidence in the early hours of Thursday, 12 June 2003 when the new Optus/Defence satellite, C1, was launched from Kourou, French Guiana (S-America) to go into a geo-stationary transfer orbit at 156 East, just a little North of Bougainville. Pointing angles for those with a dish in Canberra: 12 degrees East Azimuth, 48 degrees Elevation, 35 degrees Polarisation.

Canberra staff from Defence, Optus, Contractors, and local Radio Amateurs had been invited to attend a live video broadcast of the launch, via satellite, in the Defence theatrette in Russell Offices.

Many radio amateurs keep up a lively interest in communication satellite launches because some of these carry an amateur radio payload. Remember "Phase 3D / AO-40"?

As there is so much preparatory work done on the ground before the launch takes place, satellite owners to-be, and contractors are very anxious to know if the satellite makes it to its assigned parking spot over the equator. If it doesn't, they may have to wait years before a replacement satellite can be launched.

It was therefore not surprising that the atmosphere in the theatrette was tense that morning after a weather delay from 7.36 until the launch at 8.39 am. It became even more tense at 9.07 am, when C1 was supposed to have separated from the Ariane 5-G vehicle. For about 2 minutes there was no message that C1 had separated from the launcher's second stage! The silence that had been palpable until now, was broken by a sigh of relief from everyone present. It was later discovered that this information was delayed while data was being polled from various sources.

The Division's publicity officer, Peter Ellis, VK1KEP, who is on the staff of Defence, said that he knew seven radio amateurs in the crowd. Among these, four are current Defence/Contractor employees; two work for a major Defence supplier, and the other is a retired Defence employee. It just shows that the group was actually quite 'in-house'. They were Michael Dower, VK1ENG, who is with Comsyst (Australia) working for the C1 project, John Clare, VK1CJ, ex-army Reserve; Andy Sayers, VK2AES; and Virgil Ionescu, VK1VI, of CEA Technologies Pty Ltd; Kerry Richens, VK1KRF, from the Australian Defence Force Academy, Keith Gilby, VK1KG, and Peter Ellis, VK1KEP, both from Defence. Additionally, Lyle Williams, VK1KLW, watched the video broadcast at another Defence site in Canberra.

There were three 'in-house' guest speakers at the June 23 general meeting: Alan Hawes, VK1WX; John Clare, VK1CJ; and Gilbert Hughes, VK1GH. All three spoke to the subject of WICEN activities in the ACT from three different perspectives.

With reference to the WICEN Training Manual, Alan expanded on the practical application of the subjects dealt with in the manual. Being an active participant in WICEN activities himself, Alan listed the things that have gone wrong in the past and could go wrong in the future when an operator is in the field without having made proper preparations for it. Alan said that there are two main concerns that WICEN participants should prepare for. They are equipment and the environment. The first one includes throw-away spare alkaline batteries, mikes, torch, headset, portable antenna, power extension leads, car petrol, fuses, backpack, coaxial adapters, collapsible table, and a list of frequencies in use on the day.

To deal with the environment, a field operator should carry wet-weather gear, an area map, and wear strong light-coloured clothing, and headgear. Personal requirements include food and drink, sun crème, insect spray, and sunglasses. As communications is the name of the game, a field operator should report to ComCentre on arrival and introduce himself to everyone there.

John Clare showed how to stow personal communications gear in a toolbox while driving to and from the operations area. John had build himself two vertical antennas, one of which was a 'Slim Jim' type. This antenna was mounted inside a 20 mm-diameter plastic tube and could be raised several metres with extension rods.

Gilbert Hughes spoke about the relationship between WICEN and the State Emergency Services (SES). He said that SES does not recognise WICEN as an emergency service because none of its members have completed a training course in either WICEN or SES procedures. Gilbert added that, to become recognised, WICEN members would have to become members of SES and complete its training course.

The next general meeting will be held on Monday, September 23 at Scout Hall, Longeronong St., Farrer, at 8.00 pm. Cheers

VK2 News

Prepared by Tim VK2ZTM.

This month is the annual RD Contest and we encourage all VK2s able to take part to do so. While the winning Division last year was VK6 we still have the Trophy on display at Parramatta. It looks nice there, so we would like to win it again. The opening address for the RD Contest will be transmitted from VK2WI just prior to the 6 pm start on Saturday evening.

As is our practice we will come on air at 5.30 pm with some news items and conclude with the opening address and Honour Roll. Normal news sessions will be conducted on Sunday at 10 am and 7.30 pm.

Seppo VK2SMA has joined the VK2 Council to fill the ninth position left vacant after this year's AGM. He will be looking after the operations of the Parramatta based Trash and Treasure. A reminder that these activities are conducted on the last Sunday of the odd numbered months. The next will be on the 28 th September.

Following the T & T the Home Brew meeting is conducted in the upstairs library. A recently introduced activity – related to the Home Brew group – is a monthly construction night. The first Tuesday of the month has been selected. Times are from 7 to 9 pm. The next will be on September the 2nd. The first project was a Q-meter and the August meeting suggested a low [very] powered 80 metre CW transmitter – ideal perhaps for the Limited licence holder! During the evening the office, library and bookshop is open for business.

Members unable to attend the office on weekdays can avail themselves of these nights as well as the T & T afternoons. While on the subject of the Bookshop have a look at the VK2 web site for details. Amateurs throughout Australia can purchase from the Bookshop. WIA Members discounts may apply on the marked prices. Some copies of the RSGB Foundation Licence lecture on videotape may still be in stock with the Bookshop.

Many Amateurs have collected and often have displays of military radio equipment. One is Ian VK2ZIO, who has for many years, operated the Castle Hill Military Radio Collection. Recently he moved to Kurrajong, west of Sydney where he is setting up as the Kurrajong Radio Museum. Ian displays a piece of restored equipment at the Trash and Treasure events as well as at the annual Central Coast Field Day. For each restored item Ian produces a printed handout contained a circuit, photograph and description. These have now been placed on the web. The URL is www.froggy.com.au/vk2zio/museum Ian is always on the lookout for military based equipment. If you find yourself cleaning out a deceased estate or the like, think of Ian before you consign old military equipment to land fill. Contact with Ian VK2ZIO may be made by email to: vk2zio@yahoo.com.au or on telephone 02 4573 0601.

A reminder that the Wagga ARC have moved their field day to the long weekend in October. Divisional Council is considering holding their monthly meeting in Wagga that weekend.

There has recently been interest from New Zealand in the development of a low powered time and frequency standard for this region to act in place of VNG. The only source currently available to this part of the world is WWVH but it tends to suffer with distance. It has been suggested that the 80 metre band could be utilized with powers as low as 1 watt. Last year the Dural Technical Committee looked into the operation of VNG from the Dural site on low power on one or two frequencies for the VNG Users Consortium. There were no problems from the technical side with the proposal but the lack of funding sources to cover the power bill etc prevented the project from being undertaken. VNGUC identified the main remaining users on the previous VNG service as amateur Astronomers, who used the time voice announcements as reference on recordings made of their observations. It was felt that GPS reference sources driving a speaking device could be a likely replacement and they were proceeding to develop suitable systems. Since then the Dural Committee has looked at possibly adapting some of the existing beacon or continuous transmissions from VK2WI as a time service.

While on the subject of Dural we have a need for a heavy duty brush cutter. If anyone has such a device for which they no longer have a use, please get in touch with the Parramatta office. We even have an interest in a ride on mower. The Dural site is too wild for the lighter domestic equipment.

VK3 News

WIA Victoria web site: www.wiavic.org.au
email: wiavic@wiavic.org.au
By Jim Linton VK3PC

WIA teleconference report

A telephone hook-up of the WIA Federal Council was held on Sunday 13 July.

Also participating in the two-hour teleconference were the four WIA Directors, Federal Education Officer and Federal Technical Advisory Committee (FTAC) Chairman.

Representing WIA Victoria were its Federal Councillor Jim Linton VK3PC, Alternate Federal Councillor Peter Mill VK3APO, and Vice-President Barry Robinson VK3JBR.

The teleconference was initiated by WIA Victoria due to rapid developments occurring in relation to the World Radiocommunications Conference that concluded on 4 July, and the proposed Entry Level licence.

The key outcomes are:

Morse code requirement:

- The WIA is to keep as separate issues the removal of the Morse code requirement, and the restructure of the licensing system. Up until the teleconference WIA/

ACA liaison team and the ACA had combined these two matters, which imposed a delay of at least 18 months on the removal of the code requirement.

- The WIA is to write immediately to the ACA asking that the Morse code requirement be removed as soon as possible to permit Limited and Novice-Limited licensees access to the HF bands. It is WIA policy that the code requirement be removed as soon as possible after WRC03. The ACA's latest position is that this should occur in early 2005. However the teleconference, noting the recent prompt action of the Swiss telecommunications authority in removing the code requirement, considered that there may be a way for the ACA to waive or remove the code requirement by gazettal or other simple means. At worst, it should occur on 1 January 2004 when the amateur LCD is to be changed to take into account the expansion of the 80m DX window.

Licensing system restructure:

- The WIA is to make a preliminary submission to the ACA outlining WIA policy on licence restructure. Previously the WIA had intended to make a full submission to the ACA but has now decided to develop this in response to the ACA's proposed discussion paper due to be issued for public comment soon.

In the preliminary submission the WIA will state its policy and preferences in relation to a restructure of the licensing system. These are:

- That an Entry Level licence be introduced. The results of the WIA consultation surveying on the Entry Level licence have provided strong support for WIA policy that there be such a new licence.
- The new licence is to have qualification criteria similar to the British Foundation licence with a prescribed study text, tutorial and practical sessions, plus theory/ regulations and practical assessments.
- The theoretical knowledge of the Entry Level certificate qualification should reflect the basic radio communication and electrical theory knowledge that was originally proposed for the Novice licence, plus supervised practical demonstration of amateur station operation, and assessed theory/ regulatory knowledge.
- The WIA will propose that the Entry Level licence have all modes of transmission (subject to band planning requirements), on the majority of amateur bands (parts of some bands but not all of all bands), and a transmit power limit be considered.
- That all new radio amateurs after the restructure of licensing enter the Amateur Radio Service in Australia via the Entry level certificate, with that certificate incorporating the Regulations qualification. The current Regulations exam (to be drastically reduced in content due mainly to changes flowing from WRC03) is proposed by the WIA to be incorporated into the Entry Level certificate. It would replace the current Regulations Examination.
- That there be a two-tier licence structure - Entry Level and Unrestricted. As previously stated, the WIA recognises that the level of theoretical knowledge needed for the Novice licence has become inflated over the years. There is a small gap or difference between the Unrestricted theory and the Novice theory. At the same time, the Unrestricted theory exceeds what is required internationally and will be trimmed in the next 12 months. This will further reduce the gap between the Novice and Unrestricted theory syllabus, and it is desirable that they be merged.

WIA submission seeks education sector support for amateur radio and the Entry Level licence:

The WIA Federal President, Ernie Hocking VK1LK became aware of an opportunity for the WIA to make a submission to the Federal Department of Education, Science and Technology (DEST), in response to its discussion paper on innovation in the schools sector. The WIA submission discusses the proposed Entry Level licence and amateur radio generally as a way of developing an innovative capacity in students, and a culture of innovation in schools. The submission can be read on the website www.dest.gov.au

WIA callbook:

The callbook was discussed and agreed that there should be a 2004 edition. The Federal President Ernie VK1LK thanked WIA Victoria for its detailed written input on the callbook and constructive suggestions on how to improve it next edition. That input included comments made by WIA Victoria members in response to an earlier request for member feed-back on the callbook. Due to the length of the teleconference, the issues raised about the 2003 edition are yet to be discussed by the WIA Federal Council. But all on the teleconference supported the 2004 edition being out earlier to capture the hamfest season and Christmas gift market.

August Contests

August 16/17 **Remembrance Day Contest – Rules in July 2003 edition of Amateur Radio**

August 30/31 **ALARA Contest – Rules same as last year, published in June 2002 Amateur Radio**

VK7 News

Branch Meetings/News

Northern Branch's July meeting was a dinner talk given by Mr Ian Reid on the ins and outs of digital TV. Ian covered many aspects including the new standard, why 100Hz is better and what is available to view this new standard. An informative and entertaining evening.

North West Branch's July meeting was a fascinating night at the commercial radio station 7AD/SeaFM in Devonport. The tour was conducted by Mark Nightingale, VK7KMA, the technical officer for the stations. The tour started with the hardware of the stations and the 24 hour programming links between Launceston, Sydney and Brisbane. Particularly impressive was the way each station 7BU, 7AD, 7LA and 7SD break their own advertising slots completely automatically. A great night was had by all.

Southern Branch was treated to a talk by our own Rex Moncur, VK7MO on his recent trip Digital DXpedition with Trevor Spargo, VK7TS to Lord Howe Island, operating as VK9LS. Lord Howe is around 780 km east of Sydney and in meteor scatter range of VK2/3/4/5/7 as well as ZL and FK8. It is is roughly 10 km by 2 km, of saddle shape, with mountains of 800 metres at the South East end and hills of 200 metres at the North West end. This presented some problems occured at the original location in one of these saddles. However, another location in the second week gave greater access.

Rex outlined the logistics challenges like 18kg being the limit for luggage and nothing more than 1.4 m long. He brought along the 2 metre antennas to demonstrate that with a bit of ingenuity you can make small, light yagis that fold down to 1.4 metres! Rex took 2metre, 70cm and 23cm equipment got 32 contacts via FSK441, SSB and even JT44 weak-signal EME contacts with the USA and Sweden. Rex presented this talk at GippsTech. A very entertaining talk from our digital modes pioneer!

Tasmanian Awards/Contest

A reminder about the Tasmanian Amateur Awards and Contest:

Tassie Devil Award

To qualify for this award it is necessary to make contact with a certain number of Tasmanian amateurs, dependent upon your own location. There is a HF, VHF/UHF and IRLP section of the award. There are also 150, 200, 250, 300 upgrades available as you contact more VK7 amateurs. For more information please take a look at: http://www.wia.org.au/vk7

Tassie Trout Award

Points or "kilograms of trout" are awarded for contacts made with Central Highlands Amateur Radio Club of Tasmania members. The Club callsign (VK7CHT) gains you 3 kg of trout, the President, 2 kg, etc. Once you have 14 kg of trout you can claim the basic award, 25 kg – gold award and 50 kg – platinum award.

For more information please take a look at: http://www.vk2ce.com/vk7cht/award.htm

Wadda Cup Contest

Open to all VK amateurs the Wadda Cup is named after Waddamanna on the West Coast of Tasmania and is run by the Central Highlands Amateur Radio Club

Continued on page 35

VK4 News

Qnews

From Alistair Elrick VK4MV

Brisbane Area WICEN Group CAR RALLY REPORT

Caloundra's Falken Rally Queensland organised by the Brisbane Sporting Car Club took place on the weekend of 14-15 June. The Brisbane Area WICEN Group Inc. with assistance of Amateur Operators from as far North as Rockhampton and as far South as Melbourne, manned the start and stop points and transmitted the start times and scored times using packet, to rally headquarters at Caloundra. In addition an Amateur Radio Operator was positioned at all of the Safety On Stage points situated every 5 km along the track. Portable voice repeaters were set up on Mt Borumba and Mt Kandanga, while packet was relayed from the field to Mt Kandanga, digipeated to Maleny then on to Rally base at Caloundra.

This year saw a major upgrade of the group's equipment with the voice repeaters being linked together by UHF, so that most of the operators were able to sign on to Mt Kandanga when they left home for the exercise. Also the scoring software had to be rewritten to allow for scoring to 1/10 of a second. Special thanks must go to Nev VK4TX, who took 3 weeks annual leave just to prepare for the event.

Thanks must also go to the Sunshine Coast Radio Club who organised the scoring of the "Hella Hill Climb" and to the Queensland Digital Group for their assistance with organising the equipment upgrade. Also to Brian VK4XS who had to revise his software. VK4TX says in the lead up to the official presentations at the ARC dinner the Clerk of the Course acknowledged each of the major sponsors by name and made a general thanks to the other sponsors. Then he made the following statement (words to this effect): "I acknowledge the assistance provided by many people and by the WICEN group who have the best meals on Mt Kandanga. WICEN are amateur radio Operators who provided us with the scores and safety communications during the event. Without them we would not be able to have this event."

So from Neville, congratulations to all the operators who attended on your professional service provided to the ARC. "All I can do is to congratulate each of you on a job well done".

Things go swimmingly in Townsville

It was a case of "The weather is here, wish you were beautiful" last Sunday June 22nd when the third heat of the Strand Mini Swim was held. Providing communications support were some Townsville WICEN operators at some very stunning points around the bay. Alan/VK4PS was perched for a while on Strand Jetty observing participants in the 1km race until that event was completed. Alan then moved across to picturesque Gregory headland to keep an eye on the 2.5 and 5km swims. Meantime Phil/VK4HAI was shadowing the event organiser Bob James relaying information from the WICENnet including competitors dropping out of the race and information from stewards on course.

Ken/VK4HAI scored the best WICEN checkpoint in the state - bayside at the C-BAR cafe with great table service and a great vantagepoint of the race area. Wallaby Bob/VK4WJ found himself a comfortable rock amongst the breakwater and observed the swimmers on the turn-around leg. Then and gave timely position information back to base Gavin/VK4ZZ scored a ride in the boat for the event, helping the deployment of the swim buoys with GPS and then relaying to officials on course any problems with competitors observed by the shore based operators.

The first swimmer came home doing the 5 km event in just over an hour whilst the oldest swimmer in the race, 86 years old Thelma, completed the 5 km in just over 2 hours.

The event started at 8am and operators were released by 10-30 am, just in time to join Ken/VK4HAI at the C-BAR for a big breakfast.

Sunfest

The Sunshine Coast Amateur Radio Club Hamfest will be held in the Woombye School of Arts on Saturday 13 September 2003, from 9 to 3. The venue will be open to exhibitors from 7.00am with food and refreshments available from the kitchen. Entry fees are $5.00 single and $6.00 family. Table bookings are $15.00, which includes entry for two persons. The hall is located in the centre of Woombye township just 100 metres from the railway station.

Ample parking is available in close proximity. Entry ramps provide easy access to both halls for exhibitors and the disabled. A talk-in service will be provided on 146.850 MHz FM. Call VK4WIS for assistance. Further enquiries to the Coordinator Sunfest, Ron VK4GZ, phone 5448 4063.

North Queensland Amateur Radio Convention

Don't forget this big event will be held on 19th, 20th and 21st September.

At the TARC Management Meeting on 1st July, members appraised a number of issues regarding the plan to have part of the Convention as attending the Townsville Skyshow. Concerns included the costs of public risk indemnity, the logistics of getting hams through large crowds and a dislike of most hams to be situated in large noisy crowds. Once the concerns were reviewed it was decided to revert the Convention back to its traditional program.

The following are activity highlights of the NQ Convention Friday evening 19th September - official opening of convention at Centenary Hotel Saturday 20th - registration, trade displays, lectures, demonstrations, home brew entry and judging, convention banquet Sunday 21st September - QNEWS, WIAQ seminar, car boot sale, trade displays, monster auction. Attendees requiring accommodation need to book it NOW - it's a big weekend in Townsville during the convention weekend and accommodation will be scarce.

Spotlight on SWLing

Robin Harwood VK7RH

The country of Yugoslavia was consigned to the history books after the Serbian parliament formally abolished it and renamed it as the Federal Republics of Serbia and Montenegro. The external service, which has been using shortwave senders in Bosnia- Herzegovina, now identifies as the international radio of Serbia and Montenegro or Radio Srbija i Crna Gora in Serbian. The station still uses the old interval signal of Radio Yugoslavia.

Just to clear up a typo in last month's column. High Adventure Ministries or H.A.M. did indeed buy the former senders of FEBA in Seychelles and intended to install one of the three transmitters in Liberia but abandoned plans after civil war flared up in Monrovia, the capital city. Intensive international negotiations failed to produce a durable ceasefire and at deadline time, so far efforts to get the US administration to commit to an American led peacekeeping force to end the protracted civil war, which has spilled over into adjoining nations, have failed. As I stated, H.A.M. were hoping to relocate their transmitters to Uganda in East Africa but recent reports also speak of a tribal rebellion in the north of the country close to the Sudanese border.

Many listeners will remember the voice of Jonathan Marks on Radio Netherlands popular "Media Network" program. Jonathan also was the head of English programs at RN. After 22 years being in Hilversum, he has decided to start his own media consultancy business as from September. We will miss his voice over RN and wish him well.

On the 26th of June, there was a remarkable transatlantic VHF opening as high as 97.3 MHz. Paul Logan of Lisnaskea in Northern Ireland heard several North American FM radio stations close to the ocean. One station may have been WFRY, Watertown, New York, USA on 97.3.This would be a great circle distance from Lisnaskea, North Ireland to Watertown, New York, USA of 3,050 miles (4,912 km). This beats the current Es world record by 110 miles.

At the same time, Paul recorded an identification from WHCF in Bangor, Maine, on 88.5 MHz. David Hamilton in Ayrshire, Scotland made a recording of CBTB-FM from Baie Verte, Newfoundland, at 1950 - 2010 UT, on 97.1 MHz. Video carriers plus their sound channels were also logged from American NTSC signals lower down the VHF dial. These were heard however and not necessarily seen, making identification difficult. I believe some Quebec French language television was seen but it was extremely difficult actually finding out where they are as there are several stations on the same channel.

By now you may have noticed that HCJB-Australia has commenced a morning release of their South Pacific release. This is supposed to be from 1900 to 2000 and the evening release will be from 0800 to 1200 as from July 21st. The actual channel has yet to be announced at deadline time. I also believe that there may also be an early morning release to India at around 0100z in addition to their evening release from 1230 to 1700.

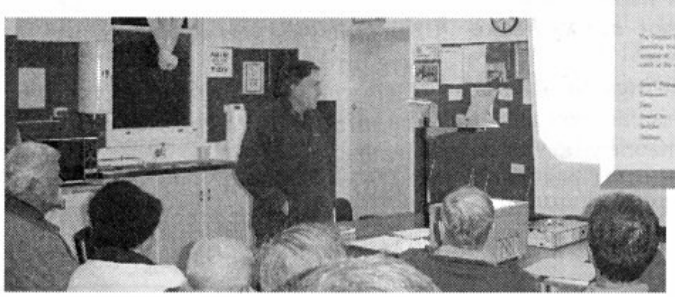
Well that is all for this month. Don't forget you can email your news to me at vk7rh@wia.org.au.

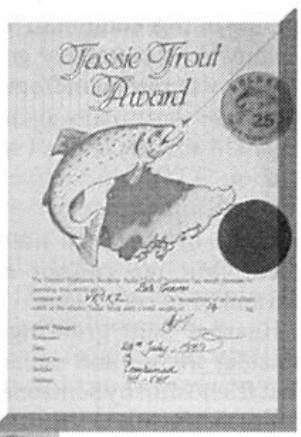
73 from Tasmania.

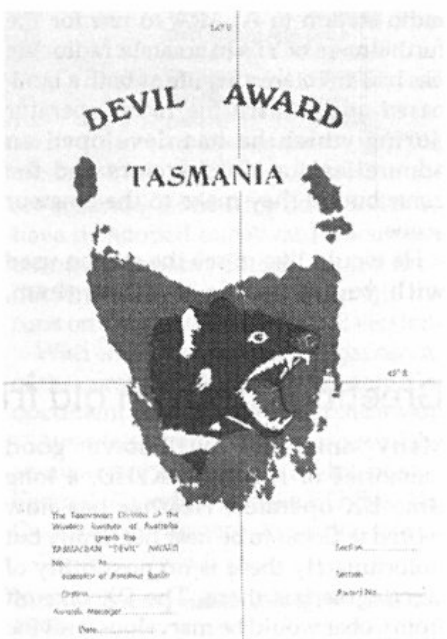
VK7 News *Continued from page 33*

of Tasmania (CHARCT). A quick fire hour long sprint where stations may only be worked once during the contest and must move at least 5kHz each contact. It's single operator phone only, using LSB on the 80m band between 3.540mhz to 3.625MHz with a maximum power of 100 watts. This contest is held in late June. For more information please take a look at the May 2003 edition of AR or the CHARCT website for details: http://www.vk2ce.com/vk7cht/wadda.htm

73, Justin Giles-Clark, VK7TW







Below: Rex, VK7MO presenting his talk about the Digital DXpedition to Lord Howe Island to the Southern Branch. South Australians may recognise Martin Luther (now VK7GN) and XYL Linda (now VK7QP) who have made Tassie their home. *Right:* the Tassie Trout Award. *Far right:* the Tassie Devil Award

ALARA

Christine Tylor VK5CTY
vk5cty@vk5cty or
geencee@picknowl.com.au

Remember the ALARA Contest

It will run for 36 hours again to give us all time to make contacts and still indulge in our other activities. There is no excuse for missing out! Repeat contacts are allowed after three hours and everyone is welcome to participate.

If you are CW proficient, or even capable, there will be people looking for CW contacts as scores towards the Florence McKenzie Trophy. As this acknowledges the large contribution made to our services in WW2 as well as one of the earliest amateurs ALARA would like to continue to have winners of the trophy. Please help if you can by giving someone a CW contact.

When the contest is over remember to send in your log. Every year there are many more participants than there are log submitted. Make sure yours is there this year. You can send your log by snail mail to Contest Manager

99 Magnolia Street,
MILDURA 3500

or by email to **alaracontest@wia.org.au**

Also, watch out for the new ALARA web page and the new address for the next ALARAMEET in Mildura in 2005. Both are on their way and look great. The address will be given in the next NOTES, but you can have a look at it through the old address. Links will be set up to both the MEET information and the Contest, all thanks to another of Dot VK3DB's sons. Our thanks to you, Roger.

Another interesting contest

Called the "Black Hat Contest", it is offered by the Finnish YLs. The date is August 9th, 0500-1700 UTC. All HF bands except the WARC bands are allowed. CW and SSB can be used. Stations may be worked once only on each of the modes, in fact you will have a score deduction for duplicate contacts!! YLs may work any stations, OMs only score for working YL stations.

Scores are 11 points for CW contact with YL station, SSB contact is worth 8 points, and the YLs earn 3 points for each OM contacted.

There are several prizes for each class of operator and logs should be sent to SARL, YL-ohjaaja, PO Box 44, FIN-00441 HELSINKI, Finland, no later than 31st August.

The 222 Net more active as the season progresses

Do participate in our YL DX net on a Monday afternoon. More and more of the overseas YLs are to be heard whenever conditions are good.

Dave is still conducting the Nets for us but we hope June will feel she can join us again soon. She is missed, though we understand it may take her a time to go back to her old activities.

ALARA gets a very generous offer

Vic VK2EVK has offered a complete radio station to ALARA to use for the furtherment of YLs in amateur radio. Vic has had an interesting life as both a land-based and a maritime radio operator during which he has developed an admiration for YL operators and the contribution they make to the amateur scene.

He would like to see the station used with young people to allow them, perhaps, to have the use of the station either as a club station, before they pass their amateur exams or as an encouragement for new operators.

ALARA is rather overwhelmed by the offer but is examining ways in which the station can be put to use as Vic would like to see it used. More information will appear in this column in the future.

ALARA is extremely grateful to Vic (with encouragement from his XYL, we believe)

An SK from NZ

Pearl ZL2QY, patron of our sister organisation, WARO, passed away in June. She reached the great age of 94. She always took an interest in YL activities and was present at many of the conferences. Pearl sent greetings to the participants of the Hamilton YL2000 International Meeting by video film as she was unable to attend in person. We are all saddened by the news of her passing.

Greetings from an old friend

Many amateurs will have good memories of Heather VK2HD, a long time DX operator. Heather has now retired to Cobar to be near her family but unfortunately there is no possibility of erecting aerials there. The DX take-off from Cobar would be marvelous, and the absence of electrical noise would be great, but we cannot always take advantage of conditions.

Heather sent greetings to all her amateur friends and thanks you all for that friendship by someone who visited her recently. Maria VK5BMT passed on the message over the 222 Net.

Silent Key

The following was advised by Greg Bird 8/7/03:

It is with much regret to inform your organization that one of your members,

Harry Bird VK2XI

passed away at 11pm on 2/7/03
May he rest in peace

W.I.A. DXCC Standings (335). (June. 30th. 2003)

Callsign	Countries
Honour Roll(326)Phone	
VK5MS	335/389
VK4LC	335/382
VK4UA	335/370
VK5WO	335/368
VK6LK	335/360
VK3AMK	335/354
VK3QI	335/349
VK3AKK	335/348
VK2FGI	335/341
VK3DYL	335/341
VK3SX	335/341
VK3EW	334/340
VK6NE	333/349
VK2AVZ	333/344
VK1ZL	333/339
VK6HD	332/358
VK3OT	331/345
VE6VK	330/366
VK4OH	330/337
VK4AAR	330/334
CT1EEN	330/000
VK3CSR	329/338
VK2DEJ	329/335
VK3YJ	327/333
General listing-Phone	
VK7BC	324/329
EA3AKN	323/331
VK5FV	323/326
VK3EUZ	323/324
VK4SJ	321/322
VK6VS	319/323
VK1TX	318/000
VK6ABS	316/000
VK4LV	313/307
VK3JI	310/325
VK6APK	310/315
VK2UK	309/314
VK5W V	306/326
VK6RO	306/312
VK6LC	306/309
VK4ICU	303/305
VK3IR	302/306
VK6DY	297/301
JA3EY	296/300
VK4DP	293/305
VK4EJ	291/293
VK2HV	288/000
VK4BAY	287/290
VK2CSZ	286/289
VK7TS	285/286
VK3DP	274/277
VK6ANC	272/276
VK2CA	265/000
VK3UY	264/266

Callsign	Countries
General listing-Phone	
VK3VQ	261/278
VK5IE	258/261
VK8NSB	255/000
VK3CIM	254/258
VK2FHN	232/000
VK8KTC	231/233
VK4AO	227/000
VK8AM	225/000
9V1RH	216/218
VK4IL	212/000
VK3DVT	206/209
VK6BH	200/000
PY2DBU	195/197
VK7JAB	186/000
G0VXX	184/000
VK6EH	170/000
VK6APH	168/169
VK4CHB	167/168
VK2BQS	164/167
VK4BP	164/000
LU5DSE	161/000
VK4ARB	159/160
VK2EJK	153/000
VK2GSN	152/000
VK7LUV	148/000
VK5EMI	148/000
VK2SPS	141/143
VK8LC	137/000
OK1ZSV	136/000
VK3DQ	133/147
VK2LEE	130/132
SV1XV	130/131
VK4FNQ	130/000
VK4VIS	127/129
VK2IRP	125/101
TG8NE	125/000
SM6PRX	121/126
VK4EZ	119/125
VK2MH	116/118
VK2YN	113/115
VK5UO	112/115
VK3MRG	108/000
VK2QV	107/000
AX4EJ	105/000
VK9RS	104/000
ZS6IR	102/104
VK2FZR	102/000
SV1GYG	102/000
3W2LC	102/000
VK2EJM	101/103
VK3KTO	101/102
VK1PRG	101/000
VK6ISL	101/000
VK5JAZ	100/000

Callsign	Countries
Honour Roll(326)CW	
VK3QI	334/346
VK6HD	333/354
VK5WO	331/347
General listing-CW	
VK3AKK	312/317
VK3KS	307/335
VE6VK	303/326
VK4LV	297/300
VK4ICU	291/000
VK3JI	274/299
VK6MK	249/252
VK7BC	246/255
VK2CWS	245/247
VK3DP	245/247
VK4DA	237/239
VK3CIM	235/236
VK3DQ	234/261
VK7TS	219/000
IK1ZOD	210/000
VK4DP	205/216
DL7PA	203/000
VK2YN	201/203
VK5UO	171/172
VK4UA	151/164
VK4AAR	144/146
OK2BNC	144/000
VK8AM	138/000
N0TM	135/000
VK7DQ	131/132
DL6UGF	126/000
DK6AP	120/000
VK8KV	112/113
K5QNM	110/113
VK5BWW	110/113
SM6GZN	110/111
VK4CXQ	106/000
UR5BCJ	103/105
VK3DG	102/000
SM6PRX	101/102
(Vacant)	000/000
Honour Roll(326)Open	
VK4LC	335/382
VE6VK	335/380
VK4UA	335/372
VK5WO	335/372
VK3AMK	335/354
VK3QI	335/350
VK3AKK	335/348
VK3OT	334/348
VK7BC	334/343
VK6HD	333/360
VK2AVZ	333/344
VK3UY	333/336
VK4AAR	332/336

Callsign	Countries
General listing-Open	
VK3JI	322/351
VK4LV	320/319
VK2UK	320/315
VK6RO	314/320
VK4DV	313/328
VK4ICU	311/313
VK4DP	309/323
VK6LC	308/311
VK3DP	305/308
VK7TS	295/296
VK2HV	289/000
VK3CIM	284/288
VK3VQ	276/293
VK6ANC	274/278
VK6MK	256/259
VK8NSB	256/000
PY2DBU	254/257
VK5UO	251/255
VK2CWS	251/253
VK3DQ	246/275
VK4DA	237/239
VK2FHN	237/000
VK8AM	236/000
VK2YN	204/206
VK2BQS	182/185
VK4CHB	177/179
VK6APH	171/172
9A4KA	168/000
SM6PRX	162/169
DL6UGF	161/000
VK3VB	153/155
SV1XV	142/144
VK2SPS	142/143
VK4EZ	140/147
ON9MCR	129/140
VK3OZ	126/127
VK7CQ	123/125
N0MSB	117/000
VK9RS	111/000
VK3MRG	109/000
VK2AJE	100/000
General listing-RTTY	
VK3EBP	253/255
VK3AMK	200/202
VK2BQS	125/127
SP3CUG	124/000
VK5RY	100/102
Gen-listing 6m. Open	
VK4FNQ	137/000
VK4ABW	109/000
Gen-listing-2m. Open	
(Vacant)	000/000
Gen-listing-Satellite	
VR2XMT	112/114

The W.I.A. DXCC program and its members pay tribute to Doug Simm VK4BP now SK and condolences to June VK4SJ. "Thanks for your participation Doug".

The W.I.A. DXCC program is audited to June 2003, if your Callsign is not listed it means you have not updated in 5 years or your score is below 100.

W.I.A. DXCC Certificate achievement awards 2003.

DXCC 125, 150, 175, 200, 225, 250, 275, 300, 325. -

DXCC Honor Roll. 326.

DXCC Excellence 335. achievement award labels are free for one Certificate only to financial W.I.A. members. A small charge is made for all non-financial members and extra award labels. For those wishing to upgrade their Certificate, enclose a SAE including two of your qsl cards to prevent postage distortion. Available now from the Federal Awards Manager.

Members submitting DXCC updates who require returned confirmation please enclose a SAE.

Callsign 4U1WB only qualifies for Washington DC, U.S.A., it is not valid for 4U1HQ United Nations HQ.

Adjustments to all computerised DXCC documents can be made on your next upgrade or email me your program if required earlier. If you notice a "silent key" listed please advise me. Federal Awards are now computerised and we are scanning all existing documents. We have developed our Award Documents using Microsoft Excel spreadsheet document saved to a common file that runs on Excel 5.0/95 & 97-2002 versions.

With email you can use the fast service of the computerised awards system. One document runs for the life of the award.

Awards and information are available at awards@wia.org.au or by post to Federal Awards Manager P.O.Box 196. Cannington. Western Australia. 6987.

"de Mal. VK6LC"

DXCC Country name changes from May 2003.

4W from UNTAET (East Timor to "Timor-Leste"). XA4-XI4 from Revilla Gigedo to "Revillagigedo". YT-YU,YZ from Yugoslavia to "Serbia and Montenegro"

Gridsquare Standings at 28 May 2003

144 MHz Terrestrial

VK2FLR	Mike	106
VK2KU	Guy	94
VK3FMD	Charlie	82
VK2ZAB	Gordon	75 SSB
VK3BRZ	Chas	68 SSB
VK2KU	Guy	67 SSB
VK3EK	Rob	62 SSB
VK3KAI	Peter	62
VK2DVZ	Ross	60 SSB
VK3XLD	David	54 SSB
VK2EI	Neil	53
VK3TMP	Max	53
VK3ZLS	Les	51 SSB
VK3BDL	Mike	50
VK3CY	Des	50
VK3BJM	Barry	45 SSB
VK2TK	John	44
VK3WRE	Ralph	44 SSB
VK7MO	Rex	44
VK2DXE	Alan	43
VK3KAI	Peter	43 SSB
VK2KU	Guy	39 Digi
VK3CAT	Tony	39
VK3KEG	Trevor	39
VK4TZL	Glenn	38
VK4KZR	Rod	33
VK2TK	John	29 SSB
VK7MO	Rex	29 SSB
VK3HZ	David	28
VK3KME	Chris	28 SSB
VK6HK	Don	28
VK4DFE	Chris	26 SSB
VK3ZUX	Denis	25 SSB
VK3YB	Phil	23
VK2TG	Bob	22 SSB
VK2KRR	Leigh	21 FM
VK7MO	Rex	21 Digi
VK3BBB	Brian	19
VK3TLW	Mark	19 SSB
VK6KZ	Wally	19
VK3AL	Alan	18 SSB
VK3KAI	Peter	18 Digi
VK2TK	John	16 Digi
VK6KZ/p	Wally	16
VK3ZYC	Jim	14 SSB
VK3DMW	Ken	13
VK2CZ	David	12
VK2EI	Neil	11 Digi
VK2DXE/p	Alan	10
VK3ANP	David	10
VK7ZSJ	Steve	10
VK2TWO	Andrew	5
VK2AKR	Neil	3 Digi
VK2AKR	Neil	1 SSB

144 MHz EME

VK2FLR	Mike	108
VK2KU	Guy	67
VK3CY	Des	66
VK3KEG	Trevor	4
VK3FMD	Charlie	3
VK2DVZ	Ross	2
VK7MO	Rex	2

432 MHz

VK2ZAB	Gordon	52 SSB
VK3BRZ	Chas	48 SSB
VK3XLD	David	46 SSB
VK3FMD	Charlie	41
VK3ZLS	Les	40 SSB
VK2KU	Guy	37
VK3EK	Rob	34 SSB
VK2KU	Guy	33 SSB
VK2DVZ	Ross	29 SSB
VK3BJM	Barry	29 SSB
VK3BDL	Mike	26
VK3KAI	Peter	26 SSB
VK3TMP	Max	25
VK3WRE	Ralph	25 SSB
VK3CY	Des	23
VK3KEG	Trevor	21
VK3HZ	David	18
VK7MO	Rex	16 SSB
VK3CAT	Tony	14
VK4KZR	Rod	14
VK2TK	John	13 SSB
VK3TLW	Mark	13 SSB
VK3ZUX	Denis	13 SSB
VK6KZ	Wally	12
VK4TZL	Glenn	11
VK3AL	Alan	10 SSB
VK3ANP	David	10
VK3YB	Phil	10
VK2TG	Bob	9 SSB
VK4DFE	Chris	9 SSB
VK3KME	Chris	8 SSB
VK6KZ/p	Wally	8
VK3BBB	Brian	7
VK2FLR	Mike	6
VK2KU	Guy	5 Digi
VK2KRR	Leigh	4 FM
VK3ZYC	Jim	4 SSB
VK2CZ	David	3
VK2TWO	Andrew	3
VK2DXE/p	Alan	2
VK7MO	Rex	2 Digi
VK2AKR	Neil	1 SSB
VK3DMW	Ken	1
VK3KAI	Peter	1 Digi

432 MHz EME

VK4KAZ	Allan	14 CW

1296 MHz

VK3XLD	David	32 SSB
VK3BRZ	Chas	31 SSB
VK3FMD	Charlie	31
VK2ZAB	Gordon	26 SSB
VK3ZLS	Les	26 SSB
VK2KU	Guy	20
VK3EK	Rob	20 SSB
VK2KU	Guy	19 SSB
VK3KWA	John	19
VK3WRE	Ralph	16 SSB
VK3KAI	Peter	14 SSB
VK2DVZ	Ross	13 SSB
VK3BDL	Mike	12
VK3BJM	Barry	12 SSB
VK3TMP	Max	11
VK4KZR	Rod	10
VK7MO	Rex	10 SSB
VK2TK	John	8 SSB
VK3TLW	Mark	8 SSB
VK3AL	Alan	7 SSB
VK3HZ	David	6
VK2CZ	David	5
VK6KZ/p	Wally	5
VK3BVP	Shane	4
VK3YB	Phil	4
VK3ZYC	Jim	4 SSB
VK6KZ	Wally	4
VK3BBB	Brian	3
VK3KEG	Trevor	3
VK2DXE/p	Alan	2
VK2FLR	Mike	2
VK2KU	Guy	2 Digi
VK3CY	Des	2
VK3KME	Chris	2 SSB
VK3DMW	Ken	1
VK3ZUX	Denis	1
VK4TZL	Glenn	1
VK7MO	Rex	1 Digi

2.4 GHz

VK3BRZ	Chas	11 SSB
VK3XLD	David	11 SSB
VK3FMD	Charlie	8
VK3WRE	Ralph	8 SSB
VK3KAI	Peter	7 SSB
VK3EK	Rob	5 SSB
VK6KZ	Wally	4
VK3BJM	Barry	3 SSB
VK4KZR	Rod	2
VK3TLW	Mark	1 SSB
VK4TZL	Glenn	1

3.4 GHz

VK3FMD	Charlie	8
VK3WRE	Ralph	6 SSB
VK3KAI	Peter	5 SSB
VK3XLD	David	4 SSB
VK6KZ	Wally	4
VK3EK	Rob	3 SSB

5.7 GHz

VK3FMD	Charlie	10
VK3WRE	Ralph	9 SSB
VK3KAI	Peter	7 SSB
VK3XLD	David	5 SSB
VK6KZ	Wally	4
VK3BJM	Barry	2 SSB
VK3EK	Rob	2
VK6BHT	Neil	2

10 GHz

VK6BHT	Neil	9
VK3FMD	Charlie	8
VK3WRE	Ralph	8 SSB
VK3KAI	Peter	7 SSB
VK3XLD	David	7 SSB
VK3EK	Rob	5 SSB
VK6KZ	Wally	5
VK3TLW	Mark	3 SSB
VK3ZYC	Jim	3 SSB
VK2EI	Neil	2
VK3BJM	Barry	2 SSB
VK4KZR	Rod	1
VK4TZL	Glenn	1

24 GHz

VK6BHT	Neil	3
VK2EI	Neil	2
VK6KZ	Wally	2

474 THz

VK7MO	Rex	1

Additions, updates and requests for the guidelines to Guy VK2KU, vk2ku@hermes.net.au, or by mail (QTHR 2002).

The guidelines (and the latest League Table) are also available on the website of the NSW VHF DX Group at www.vhfdx.oz-hams.org - click on Gridsquares.

Next update of this table will be done this month.

Stations who do not confirm their status for more than 12 months may be dropped from the table.

ar

Ron Smith VK4AGS
Federal Education Co-Ordinator

Stir, don't fry

Over the past months I have mentioned various assessment methods with their strengths and limitations. What is interesting and exciting is that currently around the world education is undergoing significant paradigm shifts, not just tinkering. These shifts are large, so much so, that within say a decade, maybe even sooner, education practice will bear little resemblance to what happens now. This certainly poses challenges for those involved in designing and implementing the education and assessment system for the proposed licence restructure. If common current practices are adopted, the system will be out of date before the ink is dry on the policy documents.

Education is looking at a range of problems that have evolved. The push started just under forty years ago with Australia leading the world. This happened in Queensland with a report published back then by W. C. Radford about school assessment. The system that has evolved since then is still considered by world level research to be the best in the world, at least for school purposes. The issues that were looked at and acted on were the inaccuracy of single event assessments and the inaccuracy of central authority assessments. When the two went together, which was and still is, common, the inaccuracy increased manifold. The solution relied on two key assessment aspects. One was to have the assessment as continual with selective upgrading of results as information was superseded, and the second was that the teacher at the "coal face" was in the best position to determine the nature and timing of the assessment, and interpreting the results.

For a long time it was believed that if a student had gained the necessary knowledge and skills then they should be successful on any valid assessment task in any format. Research in the past decade or two has shown that this is actually untrue. Education psychology has shown that people's learning styles and consequently their reaction to assessment styles, are quite individualistic. Consequently modern educational assessment involves a range of assessment methods with selection and updating of data to match the uniqueness of individuals. More recent research has shown that this change can be significantly improved when assessment and learning are matched.

In the past decade another issue is taking on significant importance. This issue has come from society in general. If you had been involved in any form of education, you would have heard comments from industry that they were receiving people who were well credentialed by the educational institution they came from but were quite hopeless in the workplace where they did not demonstrate the knowledge and skills the pieces of paper said the "graduates" had. Such comments have been directed to all types of education, schooling, vocational and trade education, and tertiary. Historically, the comments were ignored for a time, but in Australia, and interestingly also in our major economic competitors, the comments were eventually listened to, mainly in Australia by regional universities. The research showed that there were two issues, which are linked. One was what is called shallow or surface learning. The second was the low level of holistic assessment and learning, particularly with the growth of modular education. In the amateur radio scene this appears as learning the exam answers with usually little understanding, and then substantial forgetting within a very short time following the completion of the exam. It also appears as a mind-set which sees the qualification as an end point rather than the beginning of independent learning for life.

These shifts are so large that within say a decade, maybe even sooner, education practice will bear little resemblance to what happens now.

There is definitely not a single modern education and assessment method. Modern education and assessment involve a range of assessment tasks and scenarios, integrate assessment and learning, aim for understanding and application, take holistic cross-curriculum views, recognise the special knowledge about students of the lecturer/teacher, and use a range of learning activities which maximize the participation by the students by using the multi-intelligences to which modern learning psychology refers. This all sounds org-anisationally complex, but it is not necessarily so. In summary, the main difference between modern education and historical education is that historical education focused on content alone, modern education focuses jointly on content and context. Future education will emphasize context even more.

Next time I will outline one method that uses all of the modern features and around the world is leading educational reform. It is also one I use professionally in an institution which is now internationally recognized as leading the world by a significant margin in this particular education and integrated assessment method.

As the articles about education over the past year have indicated, education and valid assessment is a complex issue. The vision is to have the forthcoming educational and assessment practices for amateur radio in Australia something the rest of the world can be jealous of. To do this I have asked a highly talented group of people to work with me on this task. In addition to myself the group is (in alphabetical order) Ron Bertrand VK2DQ, Brian Clarke VK2GCE, Jim McLachlan VK5NB, Neil Penfold VK6NE, and Trevor Ward VK6HTW. The Federal President, Ernie Hocking VK1LK, is fully informed on activities and provides feedback and input from time to time. Many readers will know the talents of these people. There is nearly two

hundred years of educational experience spread across schools, universities, and vocational education. In addition all have been involved in amateur radio education with an impressive track record. All hold some form of tertiary education qualification, some in electronic engineering or related fields and some in education as well. Some are also qualified in planning and development. There are links to IARU, WIA Federal Executive, and WIA Strategic Planning Group. Educationally there is the full spectrum ranging from traditional to world cutting edge development. There is also considerable experience in educational technology such as on-line education. I could fill the whole magazine explaining just how talented this group of volunteers is. I congratulate them on being willing to help with this educational development role and join with all readers in saying "Thank you!"

"It Is Not That Easy"

In June AR I mentioned that I would discuss what is considered the most accurate learning and assessment system. Anecdotal evidence as to the most accurate method has existed for a very long time, centuries. However, formal research was mixed about the quality of the method until about forty years ago. Then the situation became clearer. This method is not accurate all the time. It is the most accurate only when certain conditions are met. It is the special conditions that make the difference.

I also mentioned last month that aspects of society find this method unacceptable.

The method is the individual, highly qualified, and highly experienced, teacher, trainer, mentor, tutor, elmer, or whatever. This is the master/apprentice scheme of old.

Why is this so accurate? Well, as mentioned, it is only accurate if certain conditions are met. It is important that the teacher be well qualified and also well experienced. However, this is not enough. The various teachers have to also share ideas and agree on standards. There is no need for the standards to be officially specified, but there must be good agreement as to what the standards should be.

Also crucial to the process is that there is good feed back to the students during the learning period. The students are guided to success over a period of time. The learning is flexible and is modified to suit students' needs. Assessment is ongoing. Assessment is not a single event.

This method is not without its problems. The main one is that the educator has to be a very special person. These can be rare. In addition the system can be costly in either money or human resources. When the number of students becomes large, it is difficult to reach agreement on the standards, particularly over a wide geographical area.

While there is no doubt as to the accuracy of this method, there is concern in society about the security of such a system. It potentially is open to alleged dishonest practices.

Over the past months, I have looked at the more traditional education and assessment methods. What about the more modern scene? Well, that is for the future columns.

As a completely different matter readers would be aware that the structure of the Amateur Radio Service in Australia is being looked at with the aim to seriously restructure it for the twenty-first century. Proving worth, that is education and assessment, will be very significant in this process. Modern education practices have many facets. As a consequence I am developing a list of possible "targets' for amateur radio education. I am sure there are many more to add to the list but I share with you the list so far. Please feel free to contact me to add more.

- Students in schools who are in engineering, electronics, or physics courses.
- Cadets
- Scouts/Guides' Badge scheme.
- TAFE students in electronics courses.
- TAFE students in AR specific courses.
- University students in electronic engineering.
- University students in physics.
- University and TAFE students in Information Technology.
- Radio Club based weekend courses.
- Radio Club based longer courses.
- Students in remote areas, including those on-line.
- Disadvantaged students.
- Prospective amateurs claiming other study and experience, ie RPL-RCC.
- Volunteer emergency services communication officers.
- Professional emergency services communication operators.
- CB clubs and similar.
- Wireless LAN computer linking clubs.
- Vacation schools for school students, commonly run by universities, the engineering profession, or teacher groups.
- ARCS (Our certificate scheme)
- Duke of Edinburgh Awards.
- Electronics technicians in many walks of life.
- Spouses/family members of current operators.
- Retirement villages/homes, including the possibility of Club Stations.

In addition any restructure should also consider the age ranges of future operators, ranging from teenagers to senior citizens.

With changes to education, there will also be a considerable range of educational style experiences over the range of ages to consider.

We also have to look after our special, and very valuable, volunteers and give them the knowledge, skills, and resources for whatever education system is developed. Linked with this is the education and accreditation of institutional educators.

The task is not a simple one. I have a group of well qualified people to assist in this task. Who are they? Well, read a future issue.

ar

Contests

Ian Godsil VK3VP, Contest Manager

Calendar July - September, 2003

Aug	2	Waitakere Sprint (CW)	
Aug	9/10	Worked All Europe DX Contest (CW)	
Aug	16/17	RD Contest (CW/SSB/FM)	(Jul 03)
Aug	16/17	Keymen's Club of Japan Contest (CW)	
Aug	23/24	TOEC WW Grid Contest (CW)	
Aug	30/31	SCC RTTY Championship	
Aug	30/31	YO DX HF Contest (CW/SSB)	
Sep	6/7	All Asian DX Contest (SSB)	
Sep	13/14	Worked All Europe DX Contest (SSB)	
Sep	27/28	CQ/RJ WW RTTY Contest	

2003 VK/trans-Tasman Contest Results

VK/ trans-Tasman Trophy (highest overall score):
VK4SN Alan Shannon 2639 pts

Category 1 (Phone):

1st.	VK4SN	2639	Alan Shannon	Glenore Grove
2nd.	ZL4DX	2586	Charles Brasell	Invercargill
3rd	VK2CZ	2563	David Burger	St Leonards
	ZL3RE	2519	Reg Bott	
	VK3IO	2398	Ron Tremayne	
	VK2AKB	2121	Karen Boskos	
	ZL4AD	2064	Brian Cook	
	VK7VH	1945	Vince Henderson	
	ZL4IQ	1846	Don Knowles	
	ZL2RX	1797	Roger Wincer	

Category 2 (QRP/Phone):

1st.	VK7NDO	1686	David O'Brien	West Moonah
	VK7HL	548	Lionel Hillard	
	VK2AVQ	344	Bob McKew	
	VK2JDD	223	Dave Dickford	
	VK2QQ	172	Brad Granger	

Category 3 (CW):

1st.	ZL2RX	1155	Roger Wincer	Nelson
2nd	VK2UQ	826	Ken Michell	Glen Innes
3rd	ZL2TW/Q	622	Stuart Watchman	Blenheim
	VK3MV	599	Peter Young	
	VK3BBT	523	Des Taylor	

Category 4 (QRP/CW):

1st.	ZL2TW	622	Stuart Watchman	Blenheim
	VK5BLS	290	Barry Samuel	
	VK2AVQ	344	Bob McKew	
1st VK.	VK4SN	2639	Alan Shannon	
1st ZL.	ZL4DX	2586	Charles Brasell	

Category 5 (SWL):

1st	VK3XRX	1984	Robert Troisi	Macleod (only entry)

Prizes

Night-Owl's (Bucket-mouth) Award - Highest Phone score in last hour:

VK4SN 454 Alan Shannon

Night-Owl's (Paddle-pumper) Award - Highest CW score in last hour:

VK2UQ 53 Ken Michell

Wooden Spoon Award (lowest scoring log):

VK7VH 3 Vince Henderson

The Final Complete Results have been published on the Contest web-site: ttp://home.iprimus.com.au/vktasman

73s, Bruce Renn (VK3JWZ - Contest Manager)

Oceania DX Contest Results

Congratulations to all the winners in the 2002 Oceania DX Contest. Activity has again increased in 2002 compared to 2001 however there was a decrease in SSB logs of some 3 % and an increase in CW logs by 22%. Whilst the conditions seemed to be poorer than the previous year, as may well be expected as we head down the declining slope of cycle 23, scores were quite high with some strong activity and competition from Europe.

The complete results for the contest are contained in the attached tables. For the first time we have included the top ten score for each continent and also a top ten box for non-Oceania participants. A summary of the best scores for each Mode, Band and Continent is detailed on the next page.

2002 SSB Continent Leaders

Contest Category	ASIA	EUROPE	NORTH AMERICA	OCEANIA	SOUTH AMERICA	NON-OCEANIA
SWL	UA0-107-181	UA3-155-75				UA0-107-181
Single-Op All	JH4UYB	ER4DX	K3ZO	VK4EMM	PY2NA	JH4UYB
Single-Op 80m	JG1IGX			ZL2AMA		JG1IGX
Single-Op 40m		PA3EPN	K3TW	VK1MJ		PA3EPN
Single-Op 20m	JA7DOT	DL7CX		VK2APK	LU9JX	JA7DOT
Single-Op 15m	JR9NVB	UA3DEE		VK8DK	L44DX	JR9NVB
Single-Op 10m	JA6EFT	UA6ADC	NA2X	VK4NEF		JA6EFT
Multi-One	RW9C	RW2F		VK8DA	R1ANC	RW9C
Multi-Multi				ZL6QH		

The rural station of VK4EMM took out the phone contest with a sterling effort. Plenty of skill as well as dedication is required to rack up a score like John's. As well as the top scores we were graced with a little more activity from other than the usual VKs and ZLs with activity from 4W, 3D2, YB, DU, 9M6, KH2 and others.

As might be expected most of the Non-Oceania top scores were from Asia. With propagation declining the North/South path is likely to yield the best overall conditions. Congratulations to PA3EPN a keen contester, present in many of the big ones, who managed to achieve a top score from Europe on the very tough 40m band.

2002 CW Continent Leaders

Contest Category	ASIA	EUROPE	NORTH AMERICA	OCEANIA	SOUTH AMERICA	NON-OCEANIA
SWL	UA0-107-181	YZ1KVA-SWL				
Single-Op All	UA0LCZ	UT7QF	N6RO	KH6ND	LU1EWL	N6RO
Single-Op 80m				VK3TZ		
Single-Op 40m	JA3HBF	OK2BVG	K3TW			JA3HBF
Single-Op 20m	JA7DOT	SP5CJQ	W7KPL	VK2APK		SP5CJQ
Single-Op 15m	JA1BBA	DJ5GG	K9ALP	VK2KM	PY7OJ	JA1BBA
Single-Op 10m	JA1PS	UA6ADC	W1END	VK4TT		JA1PS
Multi-One	RW9C	UT7L				UT7L
Multi-Multi				ZL6QH	R1ANC	R1ANC

KH6ND took out the top score this year, just edging out John, VK4EMM who nearly took out the double! Only, the points awarded for band contacts really separated the two fine CW ops, with John having more mults and more QSOs but less points. The competition in the CW contest was hot! With around 287 logs submitted, and over half from Europe, CW is certainly alive and well.

In the CW section again, the Non-Oceania scores were mainly by Asian stations with the JAs well in front on 10 and 15m. Special mention to Dick, N6RO another one of those die-hard contesters who managed to top out the rest with the top all-band Non-Oceania score. A tough ask with not too many beams pointed his way.

Awards and Plaque Winners

The Awards for the 2002 contest are unchanged and the worthy recipients are listed in the following table. John, VK4EMM takes out both the SSB and CW trophies with some very high scores. It would however be remiss not to mention that the top CW score from Oceania was by KH6ND, and the crew at ZL6QH once again produced some amazing results as the only Multi-Multi from Oceania. Is there a gang out there in VK who are willing to give those Kiwis a "spot of competition"?

2002 Trophy And Plaque Winners

AWARD	DESCRIPTION	RECIPIENT
ZL2TT Trophy	Top entrant from Oceania in Single Operator All Band Phone category - in memory of Ron Wills ZL2TT, sponsored by ZL2GI, ZL2ZL, Wellington Amateur Radio Club and NZART	VK4EMM
VK5/VK8 SOAB Phone Plaque	Top entrant from VK5 or VK8 Call areas in Single Operator All Band Phone category, sponsored by WIA South Australian Division	VK5GN

AWARD	DESCRIPTION	RECIPIENT
VK7 SOAB Phone Plaque	Top entrant from VK7 Call area in Single Operator All Band Phone category, sponsored by WIA Tasmania Division	Not Awarded
VK2QL Trophy	Top entrant from Australia in Single Operator All Band CW category - in memory of Frank Hine VK2QL, sponsored by WIA Federal.	VK4EMM
VK5/VK8 SOAB CW Plaque	Top entrant from VK5 or VK8 Call areas in Single Operator All Band CW category, sponsored by WIA South Australian Division	VK5GN
N6RO Plaque	Top entrant from North America in Single Operator All Band Phone category, sponsored by N6RO	K3ZO
ASIA SOAB Phone Plaque	Top entrant from Asia in Single Operator All Band Phone category, sponsored by the Eastern and Mountain Districts Radio Club, VK3.	JH4UYB
ASIA SOAB CW Plaque	Top entrant from Asia in Single Operator All Band CW category, sponsored by the Eastern and Mountain Districts Radio Club, VK3.	UA0LCZ

SSB RESULTS

Single Operator

OCEANIA

Australia

Call	Band	Power	Score	QSOs	Points	Mults
VK4EMM	ALL	HIGH	2,813,776	1461	3626	776
VK5GN	ALL	HIGH	2,551,020	1599	3111	820
VK2FHN	ALL	HIGH	985,566	990	1779	554
VK2CZ	ALL	HIGH	711,018	666	1701	418
VK4UC	ALL	HIGH	471,472	583	1264	373
VK4DX	ALL	LOW	419,482	677	1162	361
VK8DK	15M	LOW	393,790	743	1486	265
VK3TZ	ALL	HIGH	267,220	431	862	310
VK6NU	ALL	LOW	263,937	408	907	291
VK4NEF	10M	LOW	205,590	385	1155	178
VK2XT	15M	HIGH	198,268	511	1022	194
VK2APK	20M	HIGH	101,680	410	410	248
VK2VZQ	15M	LOW	96,570	333	666	145
VK4ADC	20M	HIGH	93,252	409	409	228
VK4BAY	ALL	HIGH	84,108	221	516	163
VK3VP	ALL	LOW	67,932	164	999	68
VK3BGH	ALL	LOW	54,932	188	443	124
VK2AYD	20M	LOW	41,912	248	248	169
VK5KCX	ALL	HIGH	8,370	68	155	54
VK1MJ	40M	HIGH	5,950	35	175	34
VKK3PRA	15M	HIGH	5,166	63	126	41
VK4FJ	ALL	LOW	3,780	45	90	42

CW RESULTS

Single Operator

OCEANIA

Australia

Call	Band	Power	Score	QSOs	Points	Mults
VK4EMM	ALL	HIGH	4,205,320	1740	4571	920
VK2AYD	ALL	LOW	2,168,947	1228	2959	733
VK4DX	ALL	LOW	1,469,320	1197	2180	674
VK5GN	ALL	HIGH	1,250,044	839	2372	527
VK4UC	ALL	LOW	416,480	432	1370	304
VK4TT	10M	LOW	413,991	513	1539	269
VK2QF	ALL	HIGH	352,625	494	1085	325
VK2KM	15M	HIGH	331,676	566	1132	293
VK2APK	20M	HIGH	273,504	777	777	352
VK8AV	ALL	LOW	264,702	436	843	314
VK3JS	ALL	QRP	171,550	237	1175	146
VK4XY	ALL	LOW	159,222	291	714	223
VK2PS	ALL	HIGH	79,304	236	431	184
VK3TZ	80M	HIGH	10,800	36	360	30

Please also note that we have a new website, www.oceaniadxcontest.com 73 de Geoff ZL3GA

5th IARU Region 3 ARDF Championships

The IARU Region 3 Amateur Radio Direction Finding Championships are to be held this year in Australia at Ballarat, a large provincial city in the state of Victoria, Australia. The event runs from Friday 28 November 2003 to Wednesday 3 December 2003.

The Victorian ARDF Group, which is organising the event, is expecting up to 100 participants from member societies in IARU Region 3 including Japan, Korea, China, New Zealand, and Australia. Guest competitors from other IARU Regions are also invited to attend in the world-wide Friendship categories. The championships are hosted by the Wireless Institute of Australia (WIA), with the WIA Victorian Division sponsoring this important event.

Full details of the event including competitor and volunteer registrations can be found at: http://www.ardf.org.au

Please register early as alternative accommodation will be limited due to another large national sporting event to be held at this time.

The proposed program in 2003 is:

Friday 28th November: *Arrival Day*

Saturday 29th November: *Equipment Check & Opening Ceremony*

Sunday 30th November: *2m ARDF Competition*

Monday 1st December: *Tour Day*

Tuesday 2nd December: *80m ARDF Competition*

Award Presentations & Closing Banquet

Wednesday 3rd December: *Departure Day*

Historic Ballarat

Ballarat is a historic gold mining town in North Western Victoria, but is only about 1.5 hours travelling time from Melbourne Airport. Transport will be provided from Melbourne Airport to the Mt. Helen Victoria University Campus which is the event centre and accommodation.

A special event amateur radio station will be available for use by our visitors.

Competitors may enter the official Region 3 competition or the world-wide Friendship categories. Team results will only apply for Region 3 competitors. A and B teams (2 teams of up to 3) will be allowed in any age/sex category (over and above this further Region 3 competitors may be allowed in the friendship only category if there are vacancies).

Related links -

Official WEB site:

http://www.ardf.org.au

Ballarat and district information:

http://www.ballarat.com

Mt. Helen Victoria University:

http://www.ballarat.edu.au

Further enquires can be directed to:

Mr. Jack Bramham, VK3WWW,
Federal ARDF coordinator,
Wireless Institute of Australia
mailto:vk3www@alphalink.com.au

ar

Ross Christie, VK3WAC
19 Browns Road
Montrose 3765, Vic
E-mail vk3wac@dodo.com

4W operations under a cloud

As mentioned in last month's DX Notes it seems that the past couple of years' operations from 4W, Timor Leste (East Timor) are definitely under a cloud. The ruling has been made that any QSOs with 4W6 stations between the 20th of May 2002 and early May 2003 will not count for DXCC.

This is unfortunate, as a considerable number of operators have put 4W in their logs since this new DXCC entity appeared on air. Only QSOs made after mid May 2003 (exact date not clear) will count, as this is when the authorities began to issue 4W3 callsigns. Thor, 4W3DX, (who operated during the disputed period as 4W6MM) has been working the bands diligently these past few weeks prior to returning home to Iceland with his officially issued 4W3 callsign. He was due to leave Timor in late June so presumably he will now have departed, however, there should be some activity from 4W soon as he left behind antennas and some equipment for following amateur operators. I have just learned that there are at least two currently active operators, they are Peter, 4W3CW, and 4W3JEG (see below).

WRC 2003 has concluded and as expected the wording of article 25 (the necessity of Morse code as a prerequisite for a HF licence) has been modified to allow national licencing authorities to drop Morse code as a compulsory requirement. The new wording basically reads "Administrations shall determine whether or not a person seeking a licence to operate an amateur station shall prove the ability to send and receive texts in Morse code signals." It is my personal opinion that the elimination of Morse code as a prerequisite for a HF licence is a mistake. In every hobby field there are equipment set-ups that range from the absolute minimum required to participate in the hobby to the most sophisticated that the hobbyist can reasonably afford (and, sometimes, then some). AR is no different. If you have entered the hobby for the buzz that 'effectively communicating over long distances' provides then the art of CW cannot be beaten for its sheer and simple efficiency. However, those who entered the hobby because of the ease of use and glamour a modern HF SSB station can provide will not understand the art and 'tradition' of CW. It is the melding of a mental skill and the minimum of hardware that produces an effective method of communication, requiring a measure of commitment and application to attain and maintain. My preference for CW is no secret, and I have always been pro CW, but I sometimes wonder what will be discarded next to satisfy those who want everything handed to them. Let the letters flow to 'Over to You'!

WRC 2003 also endorsed amateur participation in times of emergency and disaster. Governments were encouraged to make fuller and more effective use of the amateur service to provide emergency communications and allow international third party traffic to be carried in times of crisis. Many countries already regard the amateur service as a valuable source of secondary communications with a knowledgeable pool of experienced operators to draw on. This is one way in which we can earn, and keep, our precious spectrum.

The international alignment of the 40 metre amateur band has come a considerable step closer now that WRC 2003 has agreed that broadcasters in regions 1 and 3 should migrate from the 7100 – 7200 kHz segment beginning in 2009 to make room for the amateur service. This will provide a 200kHz wide segment available to amateurs all over the world. I may be called a cynic for this, but I must ask, "what will we need to give away in return?" It is interesting to note that among the dissenting countries against international alignment of the band were; most of the Arab countries, a number of South Eastern Asian nations and .....Australia. As a developed nation, and a supposedly leading power in the region, we should be setting an example of how to be flexible and forward thinking, not ultra conservative.

The 40 metre band is a great DX band, admittedly it can be noisy, but DX is reasonably easy to work with simple antennas and relatively low powers, especially if CW is employed.

The DX

4W3JEG, TIMOR LESTE (EAST TIMOR). Have a listen on 21340 kHz after 0800Z for 4W3JEG who is usually on most days of the week. [TNX 4W3JEG and The Daily DX]

9H, MALTA. Thomas, DL1ASA, say that he will be operating as 9H3TM from Gozo Island, Malta (EU-023) over the 1st until the 15th of August. His plans are to spend at least some time on all HF bands using CW, SSB and RTTY. Thomas also plans on entering the WAE contest held over the weekend of the 9th and 10th of August. QSL via bureau to DL1ASA. [TNX DL1ASA and 425 DX News]

I, ITALY. Giovanni, IK8LIU; Enzo, IK8YTG; Fabio, IZ1EGT; Marco, IZ7DOK; Oreste, IZ8EDJ and Francesco, IZ8EQF will operate as either IC8M or IC8/IK8LIU from Licosa Island (EU-031). The group hopes to get on all HF bands and 6 metres using SSB and CW over the weekend of the 2nd and 3rd of August. QSL via IZ8EDJ. [TNX IZ8EDJ and 425 DX News]

IS0, SARDINIA. Stefano, IK5XCT will be active as IS0/IK5XCT running QRP

NOTE: I have changed my ISP and email address so if you want to contact me or have any DX news to send please forward it to ***vk3wac@dodo.com.au***

from Sardinia (EU-024) between the 24th of July and the 7th of August. Listen out for him on 14060 kHz +/- around 1300Z and 2100Z. QSL via bureau or direct to Stefano Macerini Papini, Via Sarzanese Valdera 64/M, 56032 Cascine di Buti - PI, Italy. Stefano also says that e-mail requests for bureau cards will be welcome at ik5xct@amsat.org. [TNX IK5XCT and 425 DX News]

PJ, NETHERLAND ANTILLES. Carlo, I4ALU will operate as PJ6/I4ALU from the island of Saba (NA-145) in the Netherlands Antilles from the 12th until the 23rd of August. He requests that you have a listen for him on the 10 – 40 metre bands inclusive, but CW only. QSL via I4ALU [TNX I4ALU and 425 DX News]

SM, SWEDEN. Eric, SM1TDE is travelling to Gotland Island (EU-020) and will be there from the 30th June until the 15th of August. Plans are to be active on all bands from 160 – 2 metres mainly using CW. Eric will also participate in the IOTA contest as SM1T. QSL to SM1TDE via bureau. [TNX SM1TDE and 425 DX News]

T32, EAST KIRIBATI. Hiro, JA0SC says he will be active as T32SC from Christmas Island (OC-024) in East Kiribati in the first weeks of August. He will arrive on the island on the 3rd and leave on the 11th. Hiro plans on operating on 20 -10 metres mainly using RTTY and SSTV. QSL direct to JA0SC. [TNX JA0SC]

VP5, TURKS and CAICOS ISLANDS. Paolo, VP5/IK2QPR will be on air from the Turks & Caicos islands from the 16th until the 23rd of August. He will be staying at the QTH of VP5VAC on Providenciales (NA-002). Paolo will operate using SSB and CW mainly on WARC bands. QSL via IK2QPR. [TNX IK2QPR and The Daily DX]

VQ9LA, DIEGO GARCIA. Larry is a regular on the 30 metre band and can usually be found on air around 0130Z and 0200Z. [TNX VQ9LA and The Daily DX]

XU, CAMBODIA. Danny, M0GMT and Oliver, DJ9AO (both are members of the World Wide Young Contesters Club, see http://www.wwyc.net) will be on air on 160 - 6 metres using CW and SSB from the 4th until the 18th of August. Callsigns will be XU7ACT and XU7ACU respectively. QSL to G3SWH via the bureau. [TNX G3SWH and 425 DX News]

YA, AFGHANISTAN. Dan, JA1PBV (YA1BV) will be in Afghanistan until March 2004. The digital modes are Dan's specialty so have a listen for him on the usual RTTY and PSK frequencies. [TNX JA1PBV and 425 DX News]

YI, IRAQ. Dane, S57CQ works for the UN World Food Program. He is currently in northern Iraq where he will remain for the next few months. He mainly gets on air at the weekends and runs a modest 100 watts to a multiband dipole. QSL via the bureau or direct to Slavko Celarc, Ob Igriscu 8, 1360 Vrhnika, Slovenia. [TNX S57CQ and The Daily DX]

Special Events

A note from Mike, GM4SUC, regarding this years **International Lighthouse and Lightship Weekend**. "Well it doesn't seem like a year has passed since the last International Lighthouse/Lightship Weekend when over 385 stations were active at lighthouses and lightships throughout the world. This year the event will be from **0001 UTC on Saturday 16 August until 2359 UTC on Sunday 17 August 2003**. Full details of the rules and an entry form can be found at http://lighthouses.net.au/illw/index.html A list of stations that have already confirmed their participation can be found at http://lighthouses.net.au/illw/2003.htm So come and join us in the fun of the weekend, listen out for the QRP stations, newly licensed and other lighthouses and lightships and give them all a call." This is a great weekend of AR fun and activity. The event is not a contest and no numbers are exchanged, it is simply a chance to get out into the great outdoors and have a bit of fun with your friends and amateur radio, hope to hear you on the bands!

Round up

In 1969 the Japan Amateur Radio League issued the callsign **JD1YAB** to celebrate the return of the Ogasawara Islands to Japanese control after the ending of the enforced 1945-68 U.S. Trusteeship. JD1YAB is now being resurrected for use from a club station to celebrate the 35th anniversary of the return of the islands. Activity began on the 10th of June and will continue until the 31st of August. JD1YAB will be on all bands from 80 - 2 metres using SSB, CW, RTTY, SSTV, AO-10 and UO-14 satellites. All QSOs will be automatically confirmed via the JARL bureau. If you QSL direct then cards should be to JA1MRM, Saburo Asano, 3-26-8, Toyotama-Kita, Nerima, Tokyo, 176-0012 Japan. [TNX JA1ELY]

Fred Matos, W3ICM is in Iraq helping to set up a new Iraqi postal and telecommunications authority. This new authority will be responsible for the issuing of all transmitting licences and callsigns (including amateur). Fred has got in nice and early and claimed YI3DX for himself on his very first day on the job. [TNX W3ICM and The Daily DX]

A group from **Porto Alegre, Brazil** is testing out a new beacon on 28230 kHz. The beacon callsign is PY3UEB and runs 1 watt into a vertical antenna. Reports are eagerly sought and can be sent to py3ueb@baependi.com.br or py3mhz@cteparobe.com.br [TNX PY3CQ]

Mike, OM2DX, should already be back **Baghdad, Iraq** where he will operate from the club station **YI1BGD**. The Slovak embassy was totally destroyed during the fighting between the American and Iraqi forces and all his equipment and antennas went up in smoke along with it. He has applied for a personal YI callsign and is eagerly awaiting its arrival. Mike also says that he will be searching for the YI1BGD licence documentation issued in 1978 and if successful will forward it to the ARRL / DXCC. More info is available re Mike's activities at www.qsl.net/om2dx. QSL via OM3JW. [TNX OM2DX and The Daily DX]

This month our thanks go to the following amateurs and organisations. OM2DX, 4W3JEG, DL1ASA, IZ8EDJ, IK5XCT, I4ALU, SM1TDE, JA0SC, IK2QPR, VQ9LA, G3SWH, JA1PBV, S57CQ, GM4SUC, JA1ELY, W3ICM, PY3CQ, The Daily DX, 425 DX News, OPDX (BARF 80) and The RSGB.

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VHF/UHF - An Expanding World

David Smith VK3HZ - vk3hz@wia.org.au
Leigh Rainbird VK2KRR - vk2krr@telstra.com

Weak Signal operators will catered for at GippsTech

Things have really quietened down lately. A number of the more active stations have either taken holidays in warmer climes or pulled their towers down to work on antennas in preparation for next summer. Also the dark depths of the cold shack is less attractive than sitting bythe warm fire/ central heating wasting brain cells on TV.

Some diversion has been offered in the form of the GippsTech conference held at Churchill, Victoria in the first weekend in July. About 85 amateurs from around VK and ZL attended. As well as the many excellent technical presentations given, the conference provided the opportunity to catch up with people you may have spoken to many times but have never actually met. The mental picture of the person you have formed is usually quite wrong. The highlight of the conference for me was the attendance of Joe Taylor W1JT, author of the WSJT program. All presentations were of a very high standard and very interesting for the weak signal VHF/UHF/Microwave operator. Congratulations to all the organisers from the WIA Eastern Zone Amateur Radio Club for organising such a good event. The next conference is scheduled for July 3 & 4, 2004 so mark that in your diaries now.

Robbie VK3EK and his "150" net continues to attract a crowd. On 11/6, the net attracted 11 stations including VK3RS, VK3HV, VK3AUU, VK3ZUX, VK3AXH, VK3HZ, VK3AJN, VK2KRR, VK3KAI and VK3YDK. It was the 162nd running of the weekly net which now operates on any or all of 144.150, 432.150, 1296.150, 2403.150 and 50.130 as requested by participants. The net commences on 144.150 each Wednesday evening at 2030 AEST.

2 m & 70 cm FM DX

As we move into winter, only one significant ducting period occured for the southeastern states in June, plus a few periods of slight enhancement, and no other reported activity in¡ Australia.

The June event in the southeastern states began on Tuesday the 17th, peaked on the 18th and 19th and had finished in the evening of the 20th.

On the 17th there were much-improved signals from 70 cm repeaters VK3RMU, Mt. St. Leonard (Melbourne) on 438.075, with a massive 60dB+ signal here (290 km); VK3RMG, on 439.950 in Yea, at S7 (253 km); VK3RWU at the Grampians on 438.675 at S9 (471 km); and Melbourne's Kinglake 439.450 noted at S7. The usual 2 m devices at Ararat, Ballarat, Otway Ranges and Bendigo also made the grade.

On the 18th things got interesting. As well as most of the 70 cm repeaters above, several others, including VK3RMM, Mt Macedon on 439.275, which was S9+10dB (324 km) and VK3RUG at Eildon on 438.175 at S9+20dB (241 km) were active.

On 2 m, the duct dug out some interesting signal paths. Warrnambool, VK3RWL on 147.050 made the grade with an S5 signal from over 500 km away. VK3RGL at Geelong on 147.000 was in at S5. The Otway Ranges, VK3ROW on 147.275 was a good S6 (486 km).

VK2JDC, Dave from Parkes was heard making the trip into the Canberra repeater 146.950, in QSO with Rob VK1ZQR. Dave then followed up with a call to the Shepparton Club net on 146.650 VK3RGV, which took them by surprise. A 440 km trip for Dave!

Later VK2TLH, Lindsay, located just south of Bathurst, could call into the Shepparton Net, a 503 km journey and good to hear a few stations in central VK2 jumping into VK3.

Ken, VK3HKR in Melbourne was interestingly quite audible into Wagga repeater VK2RWG on 146.750 while talking to VK3HAO Larry via the Ballarat repeater on the same frequency.

Later in the night maximum distances were achieved - these being signals on 146.900 from the Mt. Gambier repeater VK5RMG (630 km). Stations worked were VK5DJ John, VK5DK Colin, who was also received on reverse, and VK5WCC Bill. The signal from Mt Gambier was only S4. Flexing its DX muscle, from 11.30 pm to 12 midnight, was VK5RMB Murray Bridge on 146.875 (733km), but quite low up to about S4. Stations worked were VK5ZMB Brian at Gawler and VK5HS Ivan in Renmark.

On the 19th signals were much lower. Early a.m. it was good to hear Phillipa VK2XPH, 50 km NE of Bathurst, making it easily into Canberra repeater 146.950, speaking with VK2HBJ Keith in Wagga.

On Friday 20th the duct was still active, but very weak and limited. One unusual contact was simplex on 2 m with VK3LO Colin in Essendon.

A new website has been set up called the VK VHF FM DX Group. This is designed to complement the email group's activities. The site is available at www.users.bigpond.com/vkvhffmdx/.

This site has been produced to cater for the interests of Australian Amateur Radio Operators who are interested in 'long haul' FM DX work, and to give others an insight into just what is possible using 'only' FM.

Join the group and let others know you are listening! A number of interesting competitions have been set up for the group.

On the site you will find the '2 & 70 FM DX 2003 / 2004 Season Tally Table'. The Season Tally is basically a log of achievement on 2 & 70 FM for a single season only. A season is a 12-month period from July 1 each year.

The idea of the long time period is to take in all seasons, starting in the cold winter months when signals don't travel too far, to the warmer air inversion summer months, with great distances, and then back into winter again.

You are able to submit your station's logs for the season table at the start of each month.

Categories in the table are:
Number of 2 m Repeaters worked,
Number of 70 cm repeaters worked,
Total repeaters worked,
Maximum distance to 2 m repeater,
Maximum distance to 70 cm repeater,
Maximum distance simplex on 2 m and
Maximum distance simplex on 70 cm.

You can find more information by visiting the website. The amount of interest in the table will determine its future.

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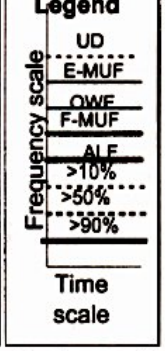
HF Predictions

by Evan Jarman VK3ANI
34 Alandale Court Blackburn Vic 3130

August 2003
T index: 58

Legend

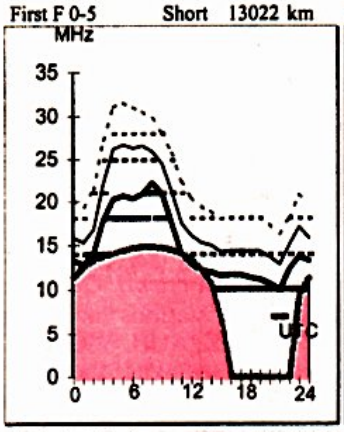


These graphs show the predicted diurnal variation of key frequencies for the nominated circuits.
These frequencies as identified in the legend are:-

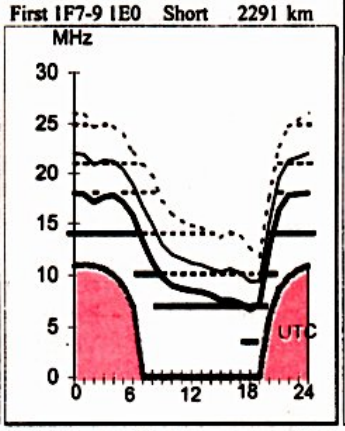
- Upper Decile (F-layer)
- F-layer Maximum Usable Frequency
- E-layer Maximum Usable Frequency
- Optimum Working Frequency (F-layer)
- Absorption Limiting Frequency (D region)

Shown hourly are the highest frequency amateur bands in ranges between these key frequencies, when usable. The path, propagation mode and Australian terminal bearing are also given for each circuit.
These predictions were made with the Ionospheric Prediction Service program: ASAPS Version 4

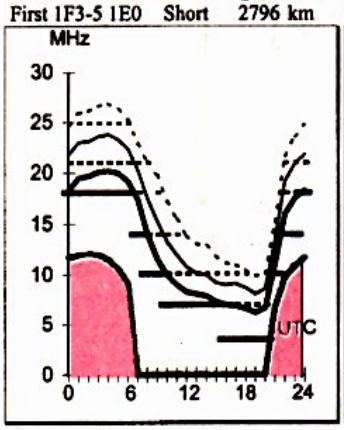
Adelaide-Amman 292
First F 0-5 Short 13022 km



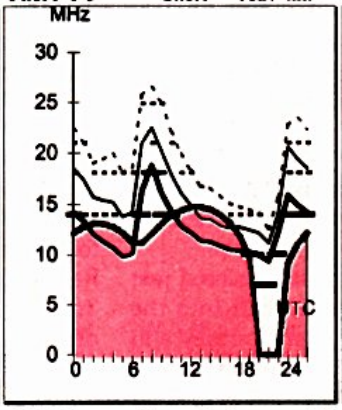
Brisbane-Auckland 123
First 1F7-9 1E0 Short 2291 km



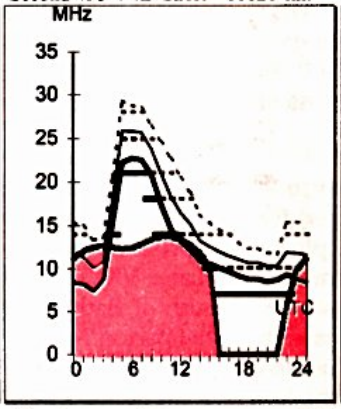
Adelaide-Invercargil 126
First 1F3-5 1E0 Short 2796 km



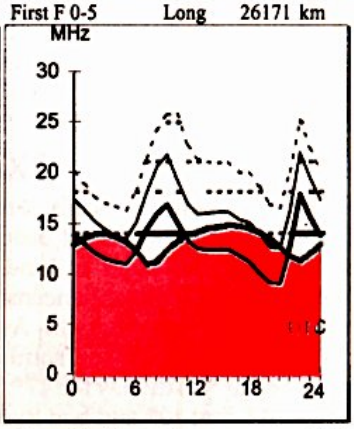
Brisbane-Dakar 217
First F 0-5 Short 1827 km



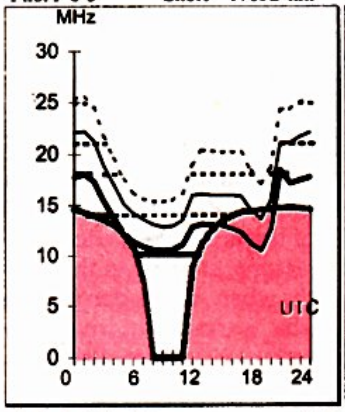
Canberra-Auckland 239
Second 4F3-4 4E(Short 11620 km



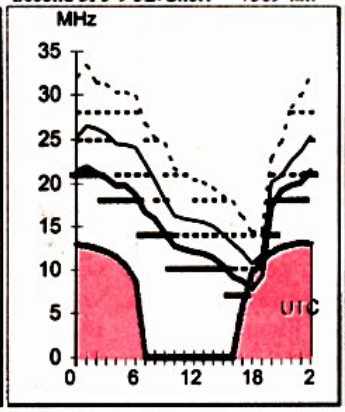
Darwin-London 145
First F 0-5 Long 26171 km



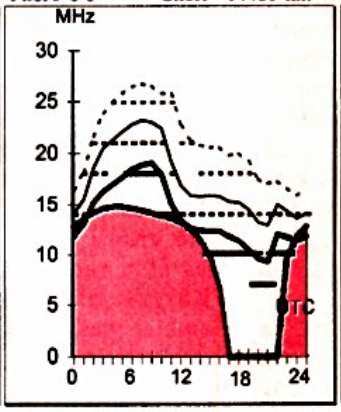
Adelaide-New York 67
First F 0-5 Short 17092 km



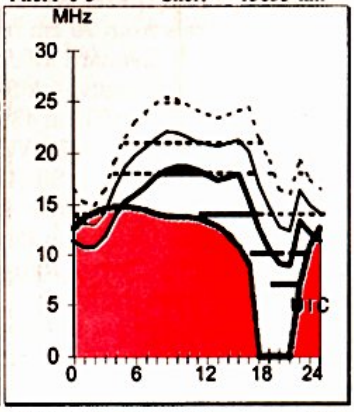
Brisbane-Honolulu 49
Second 3F5-9 3E(Short 7569 km



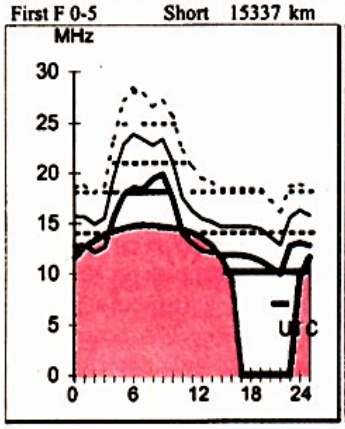
Canberra-Moscow 317
First F 0-5 Short 14481 km



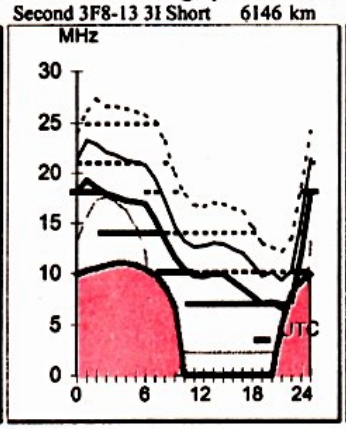
Darwin-London 325
First F 0-5 Short 13853 km



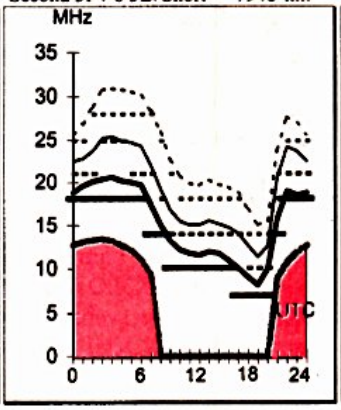
Adelaide-Rome 296
First F 0-5 Short 15337 km



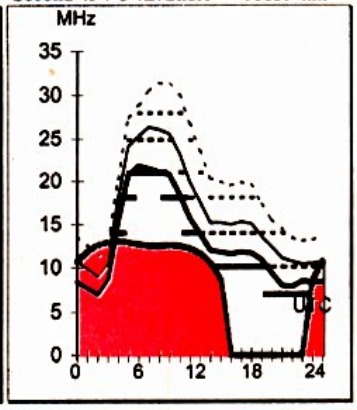
Brisbane-Singapore 293
Second 3F8-13 3I Short 6146 km



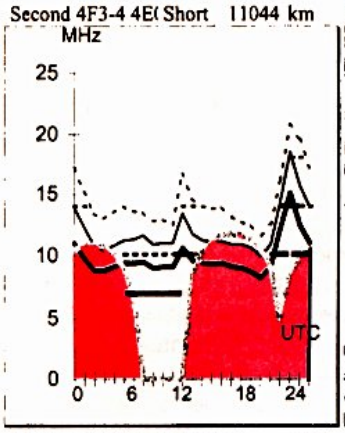
Canberra-Tokyo 352
Second 3F4-8 3E(Short 7948 km



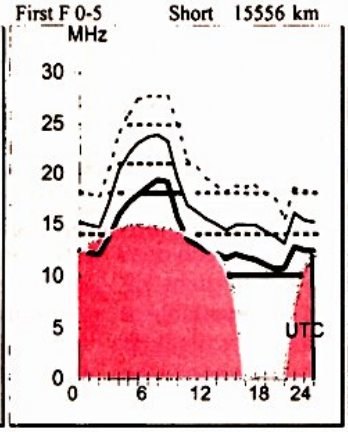
Darwin-Pretoria 242
Second 4F4-6 4E(Short 10639 km



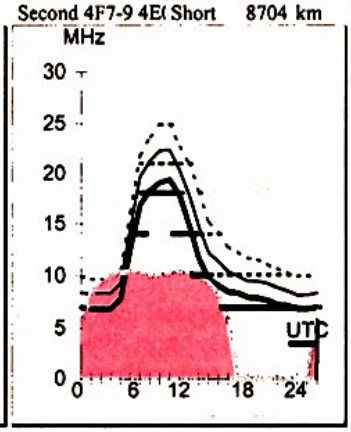
Hobart-Montevideo 161
Second 4F3-4 4E(Short 11044 km



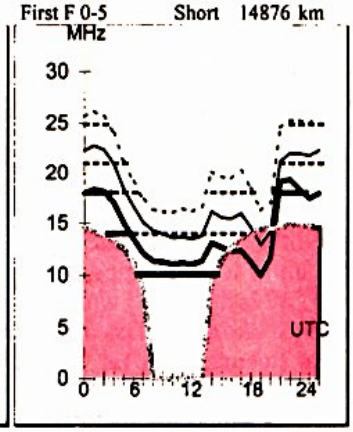
Melbourne-Budapest 312
First F 0-5 Short 15556 km



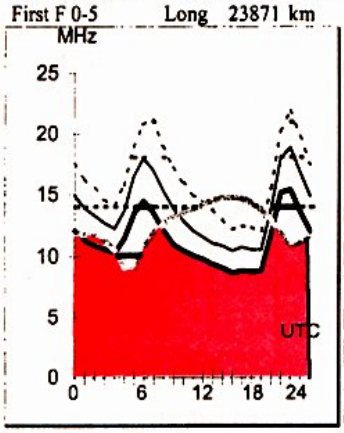
Perth-Harare 237
Second 4F7-9 4E(Short 8704 km



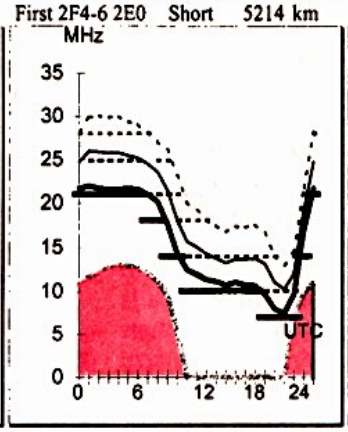
Sydney-Chicago 62
First F 0-5 Short 14876 km



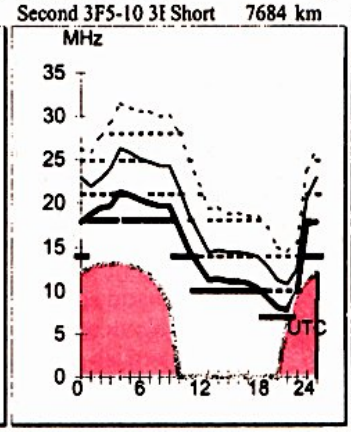
Hobart-Stockholm 136
First F 0-5 Long 23871 km



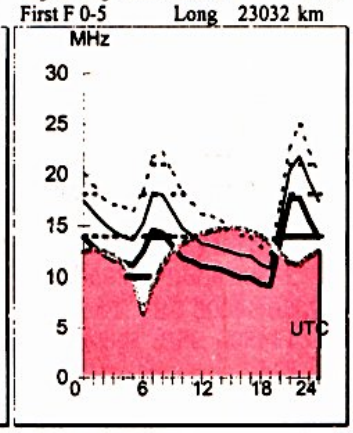
Melbourne-Jakarta 303
First 2F4-6 2E0 Short 5214 km



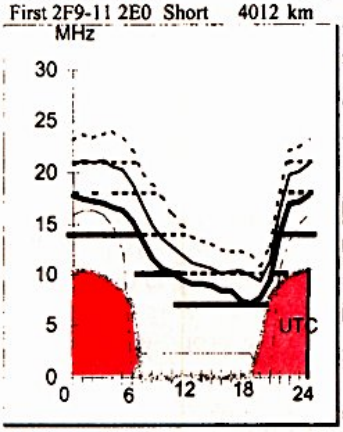
Perth-Osaka 17
Second 3F5-10 3I Short 7684 km



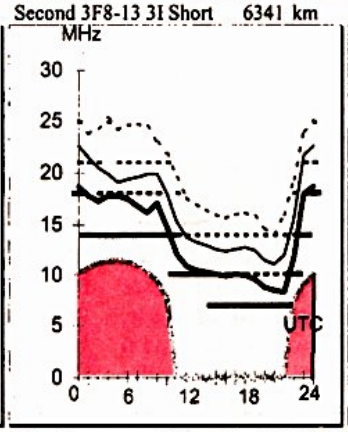
Sydney-London 139
First F 0-5 Long 23032 km



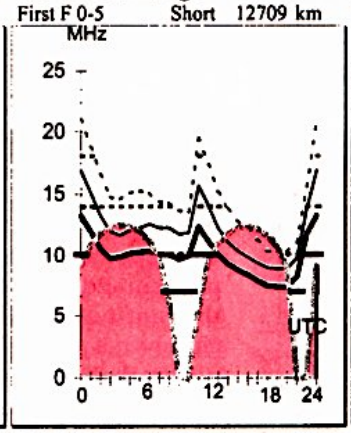
Hobart-Suva 56
First 2F9-11 2E0 Short 4012 km



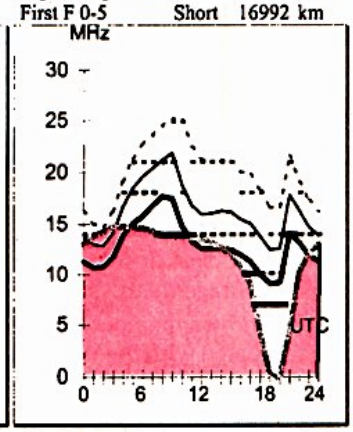
Melbourne-Manila 332
Second 3F8-13 3I Short 6341 km



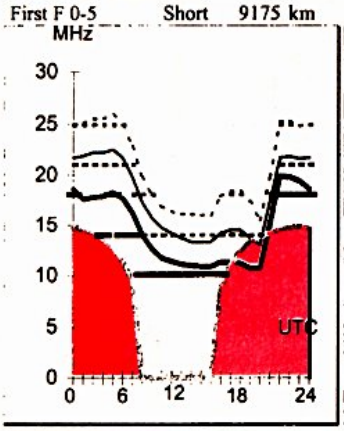
Perth-Santiago 174
First F 0-5 Short 12709 km



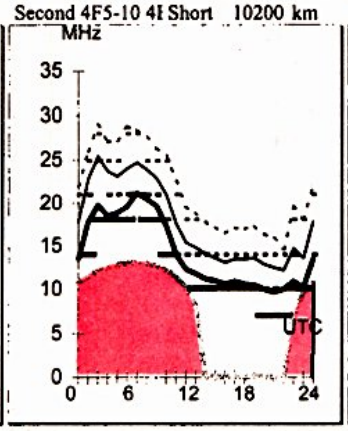
Sydney-London 319
First F 0-5 Short 16992 km



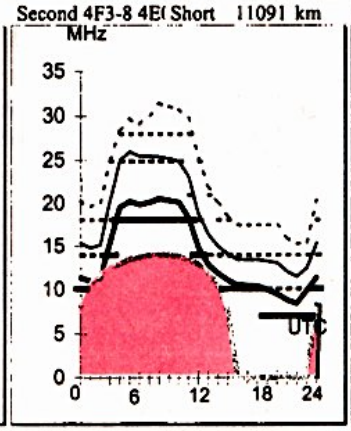
Hobart-Vancouver 49
First F 0-5 Short 9175 km



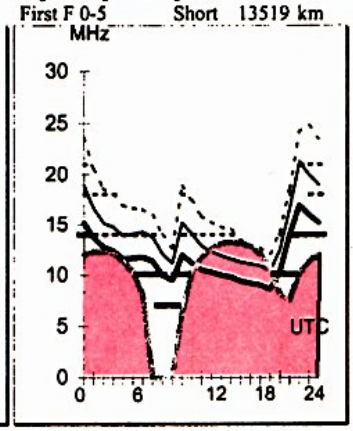
Melbourne-New Delhi 306
Second 4F5-10 4I Short 10200 km



Perth-Tel Aviv 302
Second 4F3-8 4E(Short 11091 km



Sydney-Tokyo 164
First F 0-5 Short 13519 km



Over to You

The New Licence

In December AR there was a segment on another class of licence to bring more people into Amateur Radio and more recently discussion has opened up on the Entry level Licence.

If CW is dropped I would like to see a licence like a 3rd class operator licence. This licence to cover Regulations, Q codes, and parts A, B, C and D of a basic First Aid Certificate. Then practical covering setting up and operation of a basic station, use of a dipole aerial and using an SWR meter,

General conditions of licence

1. No age limit
2. The top 25kHz of each band to 30MHz for SSB. CW on 17850-17875, 3675-3700, 7275-7300, 14325-14350, 21425-21450, 28475-28500 and FM 29500.

52000-54000 SSB, FM, CW, 144250 - 144500 SSB, above 146.000 MHz FM.

3. Power 100 W PEP SSB, 50 W FM.
4. Commercial equipment.
5. 7 SSB channels and or FM channels 3kHz wide. Top 4kHz for CW
6. Equipment channelised. If Amateur transceiver, channels to be locked in memory.
7. Below 10 MHz two channels USB on each band.
8. Each licensee sponsored by a higher-class licensee to support and encourage them.
9. Must be a member of a Radio Club affiliated with the WIA. The licence is only valid as log as the club membership is current.

WICEN could provide training in basic operating at exercises. This might be the best classroom.

In "1" the licensee could be wife, son or daughter of a licenced amateur.

In "2" Limiting power too much does not help much. There is sufficient HF crystal lock equipment still available to support this idea. 7 channels with 3kHz separation on each band should be sufficient.

In "3" 100 W covers a large range of equipment including commercial second hand HF transceivers.

In "4" As they are not full amateurs they cannot build and put into service transmitting radio equipment. However they can build other support equipment such as tuners, filters and power supplies. They should not be allowed to modify their transceiver.

In "5" 7 SSB and 3 CW channels in each band should be enough. Full calls and Novice calls can VFO onto their frequencies

In "7", as there is USB equipment on the surplus market and amateur equipment for the most part can go on both USB and LSB two channels could be allowed for USB.

In "8" I believe this is the most important point. The Amateur sponsoring has a responsibility to see that the station operator abides by the regulations, particularly if they are under 18 years. If there are interference problems the mentor will help rectify the problem and check that all is well before the station is put back on the air. However it is the licence holder who carries all the legal responsibility for the station's operation.

In "9" The local Radio club is required to encourage the new licencee in the hobby. If no local club the State Division of the WIA should arrange further support.

The local Radio Club or a group of clubs could from time to time arrange workshop weekends at which a course for the licence is presented and practical instruction is given in operating an amateur station. Topics covered could include power supplies and batteries, aerial matching and SWR measurements etc. The course will cover radio theory and regulations relevant to the licence. The regulations could cover the existing full call regulation syllabus.

I present this as a discussion paper

David Downie VK2EZD,
4 Blackwood Way, Albion Park Rail 2527

Two topical matters

There are two topical matters that I would like to comment on – changes to Article 25 of the ITU's Radio Regulations and the proposed foundation licence.

Firstly, congratulations to all involved in producing a positive outcome for the amateur radio community at the recently concluded World Radio Conference 2003 in Geneva. We have gained major future dated concessions in the 40 metre band in regions 1 and 3 and, as reasonably expected, individual administrations will now determine if morse code testing shall form a prerequisite skill prior to the issue of a particular amateur radio licence. This leads me to the proposed foundation licence.

I have held an amateur radio licence since my last year of high school in 1969. It seems I fit the perception that a substantial number of radio hams have two defining characteristics – being male and over 50 years of age. I certainly do not enjoy this image of belonging to an old man's club. Much has been said for the (desperate) need to change the face of amateur radio, and I do mean more than "less wrinkles and more females".

Push for change seems to be coming from two directions, with different agendas, but ultimately which I believe will give a beneficial outcome. Perhaps it is not terribly important that as some

The views expressed in the *Over to you* columns are not necessarily those of the Wireless Institute of Australia.

We welcome your thoughts and opinions on any aspect of Amateur Radio. Please keep letters short. If space is short a long letter may be edited or held over.

Send letters to:
Editor
AR Magazine
34 Hawker Crescent
Elizabeth East SA 5112
email: edarmag@chariot.net.au

would suggest, major change is driven by the ACA's overt, or as I suspect, covert push for reformation by simplification and devolvement of its administrative role in amateur radio licensing. What matters most is that collectively we have been presented with an opportunity to reinvigorate our hobby to ensure its long term survival.

I fully support the concept of a relatively easy entry level licence as part of a marketing strategy to entice a more representative cross-section of society to experience and enjoy our unique hobby. While we may argue long and hard about the form of, and privileges associated with this foundation licence concept, as well as whether a two or three tier structure is the desirable way to provide the best upgrade path, the bottom line is that all of us must be proactive in promoting and building for the future, not dwelling on the past.

As a high school teacher (maths/physics), I am aware of that ever-present percentage of young minds that really do get a buzz from being involved in hands-on technologies. I believe this is where the proposed foundation licence will have a major beneficial effect for the continued survival of our wonderful hobby.

Chris Bourke VK4YE

WANTED: More operators on the new digital modes!

Like most radio amateurs, I am keen to experiment and learn new operating modes as new technology comes along. Being predominantly an SSB man, I didn't have much desire to get into packet, but felt I should at least attempt setting up a station so I could find out what I have been missing out on. While knowing a little bit about computers helped, by talking to friends and surfing the Internet, within no time I was up and running. While I marveled at the technology, it wasn't long till I was bored and looking for a challenge and some more personal one on one QSOing. I kept hearing about this **PSK31** stuff, but what was it? Once again after a little research on the Internet, it wasn't long till I had enough information to build an interface to go between the PC sound card and my transceiver and some free software to get started.

The interface was very simple to build from readily available parts and setting the levels was a breeze also. I was on air in no time and astounded at how well this mode works with such a narrow bandwidth (31Hz). But immediately I discovered this mode's downfall—phase distortion. Without any forward error correction it suffers badly and can produce many errors (and usually does). Also having so many stations crowded into one voice channel has its problems with AGC pumping in the receiver. A narrow CW filter can work wonders to reduce this effect. These errors were driving me mad and I had to find a better mode soon before I lost interest all together.

Back onto the Internet and I uncovered a few more **new digital modes** to try. They were **MFSK16**, **Hell Schreiber**, **TROB** and **MT63**. I also found **MMSSTV** & **MMTTY**, free software for operating SSTV & RTTY from your computers sound card. Both work fantastic and you can test you SSTV setup by bouncing pictures off the VK3DNH repeater on 14.236MHz.

Getting back to the digital modes, free software is available for all of these modes to download and these four new modes have to be tried to believe how well they work. Perfect text can be decoded right down to the noise floor (due to FER, forward error correction), much better than CW in my experience. Most **MFSK16**, **HELL** and **THROB** activity takes place on 14.080MHz and 14.109.5MHz for **MT63**.

MFSK16, **HELL** and **THROB** are a bit slow, but still faster than I can type, but **MT63** is the big gun in digital modes, very fast with all the bells and whistles and even able to send binary files as well. Setting the levels and tuning in stations is very easy with a little practice on all these modes, and with **MT63** you can leave the PC running all day and night and actually see where and what time the DX activity was.

Now the only problem is **WE NEED MORE OPERATORS** to use these modes. Most digital operators haven't progressed from **PSK31** for whatever reason, but once having tried these other modes, (in my opinion) you won't want to go back. I have even tried these modes on 40 & 80 metres with great success.

So come on, don't be shy. Build yourself a soundcard interface, load the free software and have a go, you might surprise yourself and become addicted like I did two years ago.

To get started, the best Web sites are:

Soundcard interfaces: http://www.packetradio.com/psk31.htm

PSK31: http://www.psk31.com/

MFSK16: http://www.qsl.net/zl1bpu/MFSK/

Hell Schreiber: http://iz8bly.sysonline.it/Hell/index.htm

THROB: http://www.lsear.freeserve.co.uk/page3.html

MT63: http://iz8bly.sysonline.it/MT63/index.htm

Good luck and 73s

From Craig VK6JJJ
craig.hayhow@woodside.com.au

Editors Note. I have to apologise to Craig I have had this for a year . I do feel it is still relevant. VK5UE

OTU Re Foundation Licence VK5GX

I have followed the development of the introduction of the foundation licence for some time. Yet, I cannot see the sense and the benefit to the hobby with the introduction of this grade of licence, nor do I agree with the "grand fathering" of current novice licencees to the full call level.

The reason for the introduction of the novice licence was to provide an "entry level" into the hobby of amateur radio. This level has been successful in allowing people to experience the joys of amateur radio, whilst providing an enticement for further study towards the AOCP. Only a few years ago the WIA petitioned to further reduce the entry level with the introduction of the NLAOCP, a no code variant of the novice grade, obviously with the hope that this would further entice those who are interested in the hobby to the amateur ranks and to the membership of the WIA.

Over to you

Naturally, this has been an absolute success as the VHF/UHF bands are full of these members....aren't they?

Now, the WIA further proposes to introduce nothing more than a CB class of amateur licence, for the reason I believe of the hope of increased membership numbers of the WIA. I cannot see any benefit to the hobby in general within Australia.

The WIA claims that the foundation licence will increase the numbers on the bands....Wake up people. The bands are already occupied, and the introduction of the limited licence grade did not provide a catalyst for increased licencees or membership. I am yet to speak to some one who is a supporter of this foundation licence, and as far as I can tell from the letters published, a majority of your membership does not support this introduction either.

Perhaps the WIA should look toward the reduction in the cost of examinations. When I sat and passed my full call in 1986, at the age of 16 years, the exams were then $5. Has anyone considered that the exams should be free, or at least a token amount? Is it possible that this will encourage interested people to attempt the exams more than once? I am lead to believe that the current cost is some where in the region of $70 per exam.

Face it. The hobby will only attract people who are interested in amateur radio. When the ACA made CB licences free did this provide a catalyst of increased purchases of this equipment? I do not believe so. Are we approaching a time when all the prospective amateur has to do is collect 6 tokens from AR to receive a foundation licence?

If people are interested in the hobby they will pass the exam requirements. If anything the requirements should be left as is. The novice should be left a novice, with limited entitlements and privileges. If these licensees wish to be granted more privileges, let them work for them as many have, or is the WIA trying to buy these members off with the grandfathering proposal?

In a previous issue of AR it was stated that the ARRL reported that amateur licence take up was increasing in the US. Interesting, as they do not have a foundation licence. Perhaps, as Australian culture is more closely aligned to American than English, the WIA should consider adopting a similar licence structure to that proposed?

In closing, I do not support the introduction of the Foundation Licence. Should the WIA pursue this avenue I will cease to be a member of the WIA. After all, the WIA only represents 25% of all licence holders. Is the ACA aware of this fact?

If the WIA is truly interested in the protection of our hobby maybe it should consider retaining the standards and perhaps increasing them rather than demolishing them. If increased membership is the hidden agenda then what about canvassing the CB market. After all it is the WIRELESS INSTITUTE isn't it?

Paul M. Spinks VK5GX

Cocky Problems

I was interested to read how Bernie, VK4EJ, Cocky-proofed his antenna, (AR July 2003). I too have this problem both with my 3 element beam and also my LF dipoles that are supported by two 10m masts. Last week the cockies actually cut through the nylon halyard on one of the masts that then necessitated dropping the mast to re-thread another halyard line through the pulley. This time, at the end of the halyard line, I tied a CD-ROM and since then not one cocky has sat on the halyard. In practice I drilled a small hole near the edge of the CD-ROM, connected a small fishing line swivel to it and tied on with fishing line. Simple and it works - so far! There is one adverse effect - when the sun is low the mirror reflection may cause flashes of brilliance you never expected!

73, David Pilley VK2AYD

Review of equipment

It was a sentiment that I concurred with, reading the over to you from Alan VK3VD.

What a month to include a salient review by Doug 3UM on the ICOM IC910. Doug's exhaustive analysis of a muti-mode rig was journalistic excellence. The thorough attention to detail, actual noise figures, meaningful results and abstaining from the irrelevant was greatly appreciated.

Doug's capacity as a reviewer, certainly based on his reputation as a practising RF engineer, has the capacity to put our AR magazine back in the realms of the best international journals. I only hope that Doug doesn't discover that often quoted quip, "upon retirement I wondered how I ever found time to go to work!"

Well done, the best read I have had for years!

73 de Christopher VK1DO/VK2DO

DX spots via SMS or email

I am one of the promoters of SMSCLUSTER service.

SMSCLUSTER service provides you an unique, exclusive and innovative way of receiving DX spots from the world packet HAM cluster directly to cellular phones or pagers, via SMS or e-mail, wherever you are, without the radio network or Internet!

With a complete set of DXCC/IOTA filters and settings you will receive only the desired spot, with very small probability of faults!

ALL MODES (SSB, CW, RTTY, PSK, SSTV, SAT, EME, FSK441, JT44, JT6M, HELL, SITOR, AMTOR, AM, FM) AND BANDS (136 kHz / 1.8 / 3.5 / 7 / 10 / 14 / 18 / 21 / 24 / 28 / 50 / 70 / 144 / 220 / 430 / 900 / 1200 MHz / GHz up 1200 MHz) ARE SUPPORTED BY THE SMSCLUSTER SYSTEM !

Please visit the pages at http://www.smscluster.org to discover more about this free service, to register yourself and to use the SMSCLUSTER, the new frontier of DXing!

SMSCLUSTER is an experimental service. Please report any problem or comments to info@smscluster.org. Thanks for your cooperation!

And please do not forget to leave a message into the guestbook. Thanks!

IZ5ENH (KC9AJF) Stefano, one of the SMSCLUSTER Crew

Joseph Nelson VK2KJN

Joe Nelson passed away on May 16th, 2003 in hospital after a long illness. He was 76.

He loved radio and in his boyhood days he built crystal and valve sets as a hobby. In his retirement, he qualified as an Amateur in 1996, after doing courses with the Hornsby Club, HADARC, of which he was a member.

He operated on HF and was a revered participant in Col's Net, talking each weekday to other amateurs living in different parts of Australia. He met each month with the Amateur "Vets" at WIA House, Parramatta, enjoying the company of other "hams" over lunch.

For many years, Joe worked as shift foreman electrician at Lysaghts Wire Plant at Fivedock in Sydney, but did his training and apprenticeship in Melbourne

Joe helped at the Volunteer Coastal Patrol Radio Centre at Terry Hills, doing his weekly early morning shift. A highlight of his retirement was his participation as a volunteer at the Sydney Olympic Games. He worked in the "Communications Centre" in an organising role and continued in the same way during the following Para-Olympics.

He loved fishing and swimming, and doing laps at the Ryde-Eastwood Gym, Pool, sometimes three times a week. He was an avid follower of AFL Football. He was a gentle and kind man, always ready to help others. He leaves a fine family, his wife Joyce, daughter Sue, and three sons, Jim, Peter and Bill.

Joe will be missed by his many friends and we extend our sympathy to his family.

Submitted by John Stacy VK2JJS

VK4FB Ian C. Fisher

Ian Campbell Fisher/VK4FB passed away, aged 86, on 4th June after a lengthy illness. He had a lifetime of radio communications experience

It commenced in the 1930s when he obtained his Commercial Operators Certificate of Proficiency through the Marconi School of Wireless.

Until the end of WW2 he served as a Radio Officer on numerous ships throughout the world. At the end of WW2 Ian was recruited to Rabaul/TPNG to assist in establishing a communications system to service the then Territory of Papua New Guinea. He remained in charge of communications in the Rabaul/New Britain area until shortly before his retirement in 1973. For his outstanding service to Papua New Guinea communications he was awarded the Imperial Service Medal. As an expert professional radio telegraphist Ian was active from Rabaul as VK9VM and in retirement in Queensland as VK4FB until ill health curtailed his amateur radio activities.

Forwarded by Deane Laws/VK4ALN.

PLAN AHEAD

Jambouree On The Air JOTA 18 - 19 October

Hamads

FOR SALE NSW

• **Kenwood TS-430S** with mobile bracket manual, all filters and vox $600. **Kenwood TS-700A** 2 m all mode tcvr with manual $350 ono. **Yaesu comm receiver FRG-7700** with FRT-7700 tuner and manual $350 ono. All exc. condition. Cliff VK2CJL. Phone 02 6972 3788. email sealord@optusnet.com.au

• Shack closure: **FT-101E** S/N310361. **YC-601. FC-700 ATU. FC-707 ATU. DSE Oscilloscope lab. type Q1280. Two RF Filters 30 MHz. Two Morse keys. Two coax switches.** Two transistor testers home brew. Set coax links 50 ohm. One little used VCR. **Spares for FT-101E**. $1500 ono. VK2BUE QTHR. Phone 02 6736 1388 any time. Collect only.

• **Power supply Nemic Lambda 10-16v, 43A**, current-limit, over-voltage protection. Instructions, circuit available. $75. Bob VK2CAN. Phone 02 9416 3727.

• **Transceiver Yaesu FT-901D**-inbuilt keyer and DC/DC converter. Cables and manual $680 S/N 94081386. Desk mike $50. 6 el 10 m antenna, partially assembled $350. VK2VZB QTHR. Phone 02 9449 7548

• **Kenwood mobile mounting cradle for TS-120**, EC $40; **Mobile mount for TS-430**, new, $30; **Kenwood external VFO-120**, $40; **BC-221** US Frequency Meter SCR-211-AL with all charts, manual, AC power pack, spare new valves, EC, $60 (heavy, buyer collect!); **Roller inductor**, rotor 7 in long, 2 in. diam., 100 turns, with counter dial, ex-WW2 Tx, $50, Keith VK2AXN QTHR Sydney. Phone 02 9489 0304.

• **Emtron DX-2 HF linear amp**. mint condition with manual and carton S/N 10124. Change of QTH forces sale. $2000 ono. Carl VK2OK. Phone 02 9327 2688 evenings, email chall1@bigpond.net.au

• **Deceased Estate** from the estate of **Peter Mulligan VK2ABH. Daiwa SWR power meter** SW-410A 140 MHz, 450 MHz, $50. **Trio 9R-59DS** receiver $80. **Kenwood TM-241A/E FM/Tx** 144 MHz, needs attention S/N 30402083 $120. **Oscilloscope Stn/monitor SM-220** S/N 750317 $250. **Kantronics Terminal unit FSK** S/N 442211, needs attention $70. **Realistic communication receiver DX-160** with speaker S/N 416891 $130. **Swan 700CX T/X P/S** SWR power meter S/N 19372 $300. **Yaesu FL-2** 2m linear S/N 11030048 $80. **Signal generator LSG-16,** S/N 9102189, 300 MHz, needs attention $50. Transmitter Lic'd Amateurs only. All prices ono plus pack and postage. Ring Phillip Phone 02 9709 6060.

• **3m Sat. Dish, Chaparral MC115 Rx**, 3' Actuator, C-Band Feed and LNB, $300; 1' Actuators, $70 ea. Various Feeds and LNBs, $Ask. **NTSC-PAL Converter**, $50. Various decoders, $Ask. Several **analogue Sat. Rx's**, $Ask. **FM828 A**, $80. **HP7550 Plotter**, $150. **NEC 3D Monitor**, $50. 2xVideo Blasters, $25 ea. **Grandtec VGA-Video Converter**, $50. Roger Woodward VK2DNX, Rogerwoodward10@hotmail.com, Phone 02 9547 2546

WANTED NSW

• **Universal Avometer Model 8 circuit diagram wanted.** Mark VK2EMG QTHR

• Set of **extender boards for Yaesu FT-107 repair**. Will buy, borrow, beg, steal or swap. I am desperate. Please help. Ray VK2AWQ QTHR Phone 02 6494 1347

FOR SALE VIC

• **Trio CS-1560A dual trace 15 MHz CRO**. As new. $130 orig. boxing, 2 probes, manual incl. inspect at QTH. Reg VK3KK, Phone 03 9469 4200.

• **Drake TR-7 solid state 250 W transceiver**, with PS-7 power supply, RV-7 remote VFO, SP-75 speech processor, WH-7 watt meter, all bands including WARC, $1200. VK3JM QTHR, Phone 03 9801 4972

• **Deceased Estate**: **Tiltover Windmill tower**, self-supporting. Approx 55 feet high. Rotatable beam with motor, includes antenna **TH3-JNR 3el tri-band beam** $800. Contact - Phone 03 5821 6314.

• **Kenwood TS-130S HF Transceiver** S/N 1091549, **MC-50 desk mike**, mobile mount bracket, instruction manual $400. **Daiwa CNW-418, 500 W** PEP cross needle antenna tuner $150. All EC. Mike VK3MSA QTHR. Phone 03 9808 9039, email mickd@alphalink.co.au.

• **ARRL 2001 Periodicals CD**. Original with jewel case and instructions.$20 plus postage if applicable. Lou, VK3AQZ QTHR Cranbourne South, Phone 03 5998 1188 or destef@net2000.com.au

• WANTED VIC

• **Yaesu desk mic**. in good nick. Max VK3GMM Phone/fax 03 5985 2671

• **Vanguard AM/CW transmitter** by KW Electronics. Any condition. Can swap AM/CW transmitters; Globe, Heathkit, AWA etc or I will buy your gear. Other KW equipment wanted. Paul VK3KXG QTHR. Phone 03 5662 5422, email stampton@dcsi.net.au.

FOR SALE QLD

• **PC board for UHF amp DSE ZA1508** designed in 1986 in perfect condition. All replies to Phone 07 928 5537. If not, please leave message. Merv. Deakin VK4DV

WANTED QLD

• **Counter unit board number X54-1560-00 for Kenwood TS-130 transceiver**. All replies to phone 07 928 5537. If not, please leave message. Merv. Deakin VK4DV

FOR SALE SA

• **12 to 28 volt DC Converter PCB**. See construction article AR July 2003. Double Sided, PTH, silk screened. Limited number available. $5 ea posted Keith VK5OQ QTHR. Phone (H) 08 8280 7430 (W) 08 8259 5363 keithg@senet.com.au

Hamads

WANTED WA

• **9 MHz crystal** prefer HC49/U and **power transformer for Yaesu YO-901 multiscope** or a complete unit with good transformer. Bob VK6ABS QTHR, Phone 08 9075 4136.

TRADE ADS

PSK-31, SSTV, RTTY SOUNDBOARD
Interfaces Fully isolated, ready to plug in. http://www.G3LIV.CO.UK, johnny@melvin.com, G3LIV QTHR.

About hamads....

- Hamads may be submitted by ***email*** or on the ***form on the reverse of your current Amateur Radio address flysheet***. Please print carefully and clearly, use upper AND lower case.
- Separate forms for For Sale and Wanted items. Please include name, address STD telephone number and WIA membership number if you do not use the flysheet.
- Eight lines (forty words) per issue free to all WIA members, ninth and tenth lines for name and address. Commercial rates apply for non-members.
- Deceased estates Hamads will be published in full, even if the ad is not fully radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from members who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising (Trade Hamads) are pre-payable at $25.00 for four lines (twenty words), plus $2.25 per line (or part thereof), Forty word maximum, minimum charge of $25.00. Cheques are to be made out to: WIA Hamads.
- Copy typed or printed clearly please, and received by the deadlines shown on page 1 of each issue of Amateur Radio.

Email: *newsletters@ozemail.com.au* **Fax:** *03 9756 7031*

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It is impossible for us to ensure that the advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore, advertisers and advertising agents will appreciate the absolute need for themselves to ensure that the provisions of the Act are strictly complied with.

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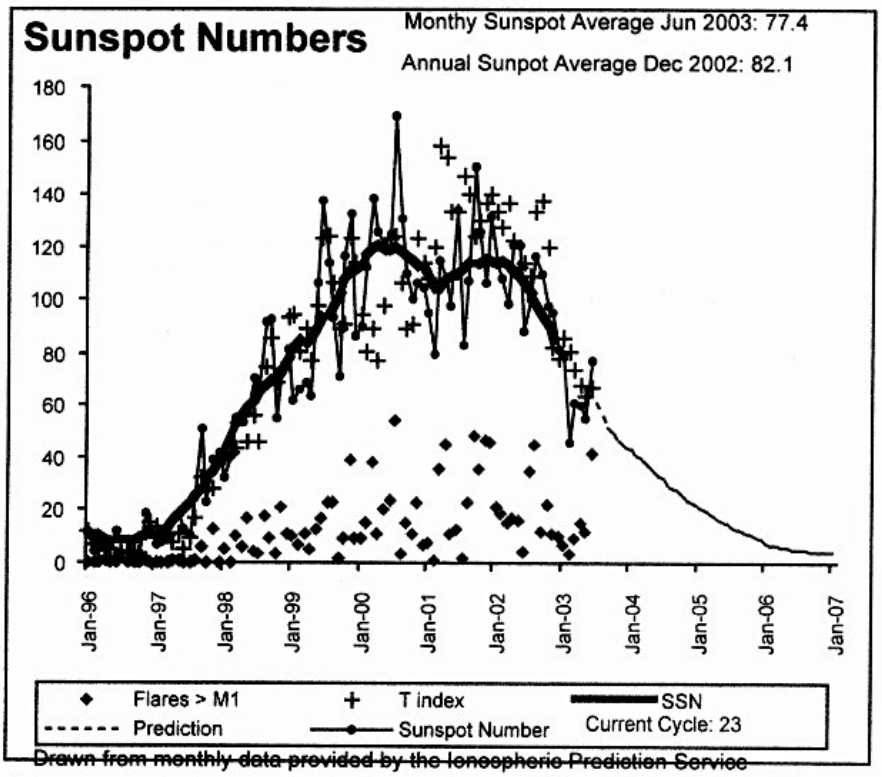
All advertisers are advised that advertisements containing only a PO Box number as the address cannot be accepted without the addition of the business address of the box-holder or seller of the goods.



International Amateur Radio Union. Region 3

Extracts from MONITORING SYSTEMS NEWSLETTER. APRIL 2003. (Check the web site for more information. VK5UE)

The first happy news of the year is that HARTS has sent its first exhaustive report for the Monitoring Systems Bulletin of Region 3. OM Kieran VR2XBM, has done lots of painstaking work and motivated a few very hard working amateurs like VR2GI OM David, in getting lot of information in a technical way, with spectrograms.

This month, due to his illness, OM Henry VK8HA the Federal Coordinator from Australia, could not report.

All the information from the other Regions is on their web sites.

http://iarums.com/
http://www.echelon.ca/iarumsr2/contact.html

Best 73s,

de B.L.Manohar "Arasu" VU2UR.
Regional Monitoring Systems Coordinator

Division Directory

The Amateur Radio Service exists for the purpose of self training, intercommunication and technical investigation. It is carried out by amateurs who are duly authorised people interested in radio technique solely with a personal aim and without pecuniary interest.

The Wireless Institute of Australia represents the interests of all radio amateurs throughout Australia. National representation is handled by the executive office under council direction. There is one councillor for each of the seven Divisions. This directory lists all the Divisional offices, broadcast schedules and subscription rates. All enquiries should be directed to your local Division.

VK1 Division Australian Capital Territory,
GPO Box 600, Canberra ACT 2601

President	Alan Hawes	VK1WX
Secretary	Deane Walkington	VK1DW
Treasurer	Linden Orr	VK1LSO

Broadcast schedules **All frequencies MHz. All times are local.**

VK1WI transmits each Thursday evening at 2000 hrs local time on VK1RGI 146.950 MHz and 438.375 MHz including the linked repeater system on VK2RGN Goulburn, VK2RHR High Range, VK2RMP Madden Plains and VK2RTW Wagga Wagga. VK1 Home Page *http://www.vk1.wia.ampr.org*

Annual Membership Fees. Full $80.00 Family $38.75 Pensioner or student $71.00. Without *Amateur Radio* $48.00

VK2 Division New South Wales
109 Wigram St, Parramatta NSW
(PO Box 432, Harris Park, 2150)
(Office hours Tue., Thu., Fri., 1100 to 1400 hrs.)
Phone 02 9689 2417
Web: *http://www.wiansw.org.au*
Freecall 1800 817 644
e-mail: *vk2wi@wiansw.org.au*
Fax 02 9633 1525

President	Brian Kelly	VK2WBK
Secretary	Owen Holmwood	VK2AEJ
Treasurer	Noel May	VK2YXM

VK2WI transmits every Sunday at 1000 hrs and 1930 hrs on some or all of the following frequencies (MHz): 1.845, 3.595, 7.146, 10.125, 14.170, 18.120, 21.170, 24.950, 28.320, 29.170, 52.150, 52.525, 144.150, 147.000, 432.150, 438.525, 1273.500. Plus many country regions on 2m and 70cm repeaters. Highlights are included in VK2AWX Newcastle news Monday 1930hrs. on 3.593 , 10 metres and local repeaters. The text of the bulletins is available on the Divisional website and packet radio. Continuous slow morse transmissions are provided on 3.699 and 145.650. VK2RSY beacons on 10m, 6m, 2m, 70cm and 23cm. Packet on 144.850.

Annual Membership Fees. Full $80.00 Pensioner or student $63.00. Without *Amateur Radio* $50.00

VK3 Division Victoria
40G Victory Boulevard Ashburton VIC 3147
(Office hours Tue 10.00 -2.30)
Phone 03 9885 9261
Web: *http://www.wiavic.org.au*
Fax 03 9885 9298
e-mail: *wiavic@wiavic.org.au*

President	Jim Linton	VK3PC
Secretary	John Brown	VK3JJB
Treasurer	Jim Baxter	VK3DBQ

VK3BWI broadcasts on the 1st Sunday of the month at 20.00hrs Primary frequencies, 3.615 DSB, 7.085 LSB, and FM(R)s VK3RML 146.700, VK3RMM 147.250, VK3RWG 147.225, and 70 cm FM(R)s VK3ROU 438.225, and VK3RMU 438.075. Major news under call VK3ZWI on Victorian packet BBS and WIA VIC Web Site.

Annual Membership Fees. Full $83.00 Pensioner or student $67.00. Without *Amateur Radio* $51.00

VK4 Division Queensland
PO Box 199, Wavell Heights, Qld. 4012
Phone 07 3221 9377
e-mail: *office@wiaq.powerup.com.au*
Fax 07 3266 4929
Web: *http://www.wia.org.au/vk4*

President	Ewan McLeod	VK4ERM
Secretary	Bob Cumming	VK4YBN
Treasurer	Bill McDermott	VK4AZM

EVERY SUNDAY, at 9am LOCAL (Sat 2300 UTC). From Far North Queensland On 7.070/2 MHz. From South East Queensland:- 1.825, 3.605, 7.118, 10.135, 14.342, 21.175, 52.525, 147.000, 438.500 MHz. Right throughout VK4 scan 146.6 to 148.0 MHz again at 9am local. SUNDAY 6:45pm hear LAST week's QNEWS broadcast 3.605 and 147.0 MHz from South East Queensland. MONDAY 7:00pm hear YESTERDAY's news again on 146.875 MHz broadcast from Brisbanes Bayside repeater, and then 7:30pm on 3.605 and 147.0 MHz from Sth East Queensland. Text editions on packet internet and personal email, visit www.wia.org.au/vk4 News is updated 24/7 in both text and audio on this site. MP3 Audio from same website by 2300 hours each Saturday. Contact QNEWS, packet sp QNEWS@VK4WIE.BNE.QLD.AUS.OC email qnews@wia.org.au

Annual Membership Fees. Full $95.00 Pensioner or student $81.00. Without *Amateur Radio* $69.00

VK5 Division South Australia and Northern Territory
(GPO Box 1234 Adelaide SA 5001)
Phone 08 8294 2992
web: *http://www.sant.wia.org.au*
email: *peter.reichelt@bigpond.com*

President	Trevor Quick	VK5ATQ
Secretary	Peter Reichelt	VK5APR
Treasurer	Trevor Quick	VK5ATQ

VK5WI: 1843 kHz AM, 3.550 MHz LSB, 7.095 AM, 14.175 USB, 28.470 USB, 53.100 FM, 147.000 FM Adelaide, 146.800 FM Mildura, 146.900 FM South East, 146.925 FM Central North, 438.475 FM Adelaide North, ATV Ch 35 579.250 Adelaide. (NT) 3.555 LSB, 7.065 LSB, 10.125 USB, 146.700 FM, 0900 hrs Sunday. The repeat of the broadcast occurs Monday Nights at 1930hrs on 3585kHz and 146.675 MHz FM. The broadcast is available in 'Realaudio' format from the website at www.sant.wia.org.au Broadcast Page area.

Annual Membership Fees. Full $88.00 Pensioner or student $73.00. Without *Amateur Radio* $58.00

VK6 Division Western Australia
PO Box 10 West Perth WA 6872
Phone 08 9351 8873
Web: *http://www.wia.org.au/vk6*
e-mail: *vk6@wia.org.au*

President	Neil Penfold	VK6NE
Secretary	Roy Watkins	VK6XV
Treasurer	Bruce Hedland-Thomas	VK6OO

VK6WIA: 146.700 FM(R) Perth at 0930hrs Sunday relayed on 1.865, 3.564, 7.075, 10.125, 14.116, 14.175, 21.185, 29.120 FM, 50.150 and 438.525 MHz, Country relays 3.582, 147.200 (R) Cataby, 147.350 (R) Busselton, 146.900 (R) Mt William (Bunbury).147.000 (R) Katanning and 147.250 (R) Mt Saddleback. Broadcast repeated on 146.700 at 1900 hrs Sunday relayed on 1.865, 3.564 and 438.525 MHz : country relays on 146.900,147.000, 147.200, 147.250 and 147.350 MHz..Also in "Real Audio" format from the VK6 WIA website

Annual Membership Fees. Full $71.00 Pensioner or student $65.00. Without *Amateur Radio* $39.00

VK7 Division Tasmania
PO Box 371 Hobart TAS 7001
Phone 03 6234 3553 (BH)
Web: *http://www.wia.org.au/vk7*
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VK7WI: At 0930 hrs every Sunday on 146.700 MHz FM (VK7RHT, Hobart) and relayed on 147.000 MHz FM (VK7RAA, Launceston), 146.625 MHz FM (VK7RMD, Ulverstone), 146.750 MHz FM (VK7RNW, Ulverstone), 147.075 MHz FM (VK7RWC, Rosebery), 3.57 MHz LSB, 7.090 MHz LSB, 14.130 MHz USB and UHF CB Channel 15 in Hobart area.

Annual Membership Fees. Full $90.00 Pensioner or student $77.00. Without *Amateur Radio* $57.00

VK8 Northern Territory is part of the VK5 Division and relays broadcasts from VK5 as shown, received on 14 or 28 MHz. The broadcast is downloaded via the Internet.

Roll Call

of Australian Amateurs who became *Silent Keys* as a result of contact with the enemy during WW2

Sgt J.A. Burrage 459 Sqdn (VK3UW). Died during a flying battle over Sumatra.

Fl Lt J.E. Goddard (VK6JG) 582 Sqdn RAF over France after a flying battle.

Radio Officer N. Gunter (VK3NG). Killed when the SS "Kowarra" was torpedoed off Sandy Cape Q. with the loss of 35 lives.

Cpl V.J. Jarvis (VK2VJ) 3 Squadron RAAF, Died in a Middle East ground battle".

Gunner S.W Jones (VK3SF) Killed in action, Dutch New Guinea.

Lieutenant D. A Laws (VK4DR) "M" Special unit, murdered by pro-Japanese natives near Saidor New Guinea.

Leading Teleg. J.E. Mann (VK3IE) one of 137 crew members of HMAS "Parramatta" who died when the ship was torpedoed in the Mediterranean.

Sgt J. McCandlish (VK3HN) 'M' Special Unit, Dutch New Guinea. Executed by the Japanese.

F/ Lt P.P. Paterson (VK6PP) 24 Sqdn RAAF. Died after a flying battle near Rabaul.

Telegraphist A.H. Rippon (VK6GR) Presumed Killed In Action when all aboard HMAS "Sydney" were lost.

J.E. Snaddon (VK3VE) 459 Squadron RAAF. Died after a flying battle over the Mediterrean.

Radio Officer R. P. Veal (VK3PV). Killed when MV "Neptunia" was bombed and sunk in Darwin Harbour.

F/0 BR James (VK5BL) 76 Sqdn RAF. Died during a Halifax raid on Magdeburgh Germany.

Signaller C.D. Roberts (VK2JV) Died while a POW working on the Thai-Bunna railway.

Lest We Forget

Reflections...

by Col Harvey VK I AU

An Australian Amateur on the Burma/Siam railway

CHARLES DARCY ROBERTS was born in Sydney in March 1909. In July 1940, by then 31, an unmarried solicitor and a Radio Amateur Operator with the call sign VK2JV, he enlisted in the 2nd AIF at Paddington Engineering Depot. By August he was at Ingleburn 8th Division Signals as a Special Operator Group 2. He was embarked on H.M.S "Queen Mary" on 2 February 1941, disembarking in Singapore 17 days later. Posted to HQ AIF Malaya, he was detached for duty with HQ 8 Division Signals.

Charles was wounded in the left shoulder by a Japanese bomb fragment on 26 January 1942 and transferred through a Casualty Clearing Station to 10 Aust. General Field Hospital at Changi. Japanese troops entered Singapore Island on 8 February 1942. Singapore was surrendered on 15 February 1942. Charles rejoined his unit on 22 February and became a P.O.W.

In April 1943 he was sent to "F" Force", one of 9 mixed nationality groups of POWs, This party of 3662 Australian POWs (many already unfit) was sent from Changi to work for the Japanese at primitive camps along the Burma Railway. After a five day rail journey to the rail-head at Bam Pon in Siam, packed 30 to a steel rice truck, unable to lie down and with very limited food and water, they were marched by night 300 km up a jungle track, to Songkuri near the Burma/Siam border. The appalling conditions in their 14 "camps", coupled with inadequate food and hard labour meant that 1061 of the contingent died. Those that survived became mere skeletons, most weighing less than 45 kg.

Of the total of 13000 Australians (mostly 8 Div. and 7 Div AIF with some Navy and RAAF POWs) sent to work from 70 "camps" in Burma and Thailand, 2815 did not return. Charles Roberts VK 2JV was one of them. He died of cerebral malaria on 3 July 1943 and was buried in grave 39 at Kami Sonkrai. Later his remains were moved to a collective grave (14, A8) at the War Cemetery at Thanbyuzayat near Moulmein in Myanmar. (then Burma). Signalman Charles Roberts appears to be the only Australian Amateur Radio Operator who died a prisoner of war.

Vale- Charles VK2JV

CITATION- SX 2395 Cpl J.G. PHILLIPS, B.E.M. Sigs 1, Australia Corps

For "Exemplary conduct & devotion during SYRIAN Campaign"

Although very sick and attending hospital three times daily for treatment, this NCO continued at his post throughout the Syrian Campaign, often working twenty hours a day under exceptionally difficult conditions.

As NCO in charge of all wireless communications of 21 Australian Infantry Brigade, Corporal Phillips had to maintain contact with attached units, with the Navy and with Cavalry units over a wide range of frequencies and at the same time remain in constant communication with the Battalions in the Brigade.

On account of the heavy toll taken by sickness among the Brigade signals personnel and the extreme difficulty faced in the maintenance of WT communications in the rugged and mountainous country, Corporal Phillips felt it imperative that he should stay at his post and would not go to hospital when ordered. His control of WT communications was exemplary and his devotion to duty meant that it (was) recommended he be granted the British Empire Medal.

The award was promulgated in the London Gazette in December 194 1. The insignia was received from London in April 1941 and was presented to his widow Mrs N.M. Phillips (of Glenelg S.A.) in August 1944 at Government House, Adelaide, by the Lieutenant Governor of South Australia,

Authority File AMF 14/P-Q

Postscript.

The late Sgt: Phillips (W5BW), an Adelaide radio engineer was 30 when he enlisted as a Private in the 7th Division AIR. On 18/10/40 he left for the Middle East aboard the "Queen Mary", returning as an A/ Sgt. on 19/4/42 aboard the "Dorset".

He was killed on-duty driving an army vehicle when it overturned near Bethanga N.S.W. on 1/1/43. A Court of Enquiry found that he was not responsible for the accident.

He is buried in Grave F A 13 in the Albury War Cemetery

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